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Guest Editorial

The Child and Educational Research — For Whose Benefit?

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1979 marks the occasion for nations to renew and reaffirm concern for the present and future development of their children. When the General Assembly of the United Nations passed a resolution declaring 1979 the International Year of the Child, they outlined the following major aims:

> To encourage all countries, rich and poor, to review their programmes for the promotion of the well-being of children, and to mobilize support for national and local action programmes according to each country's conditions, needs and priorities;
>
> To heighten awareness of children's special needs among decision-makers and the public;
>
> To promote recognition of the vital link between programmes for children on the one hand, and economic and social progress on the other;
>
> To spur specific, practical measures — with achievable goals — to benefit children, in both the short and long term on the national level. (United Nations, no date specified.)

As these aims indicate, the year is intended to stimulate thought and action toward developing each nation's most valuable resource — its children. Special attention is encouraged for the many children with special needs: handicapped children, slum children, abused children, orphans, refugee children, children exposed to life in families with limited personal and physical resources, and the many children suffering from malnutrition. The brochure circulated by the United Nations further states:

> While programmes of national and local action remain the focal point of the year, International Year of the Child should also stimulate new research on the needs of children and the widespread gathering and dissemination of research on child related issues.

This call for research on children and their needs leads to the central

query of this editorial — research for whose benefit? Will International Year of the Child yield increased funding for child-related researchers and programmers or will it yield direct benefits to children? While the answer to this question may seem obvious to some, it is apparent that the significance of research activities generated during International Year of the Child, or any year for that matter, must be assessed at several levels: significance for researchers, for practitioners dealing with children, for society as a whole, and for children and their unique needs. One cannot assume that, because research is conducted about children, the data so gathered will immediately benefit them. In the strictest sense, the researcher is removed from the arena where his or her findings might have greatest impact — the home, the school, and the social service agency. In addition, a single study may provide only one piece of the large puzzle of human growth and interaction. Research is a time-consuming effort which demands special skills; thus the application of findings often are not immediately evident, even to those who understand the research. This being the case, why conduct research at all? Does research really make a difference in the day-to-day life and activities of children?

In order to answer this question, readers and contributors to this journal should give thought to how the relationship between researchers and practitioners in education might be strengthened. The gulf between the researcher who collects the data and the practitioner or consumer who ultimately applies the new information has continued to widen. Researchers are viewed as operating in sterile ivory towers, far from the mainstream of the problems which form the basis of their research. Practitioners looking for new insights in dealing with children turn from the research journals pleading that the studies therein are frequently irrelevant, that they focus on part of rather than on the whole child, and that they introduce unnecessary complexities in data collection and reporting. Researchers retort by claiming that practitioners lack motivation to maintain levels of scientific rigour and fail to apply the information with sufficient attention to the conditions of the research. The arguments could go on and on, but the issue remains that the effect of research on the daily lives of children depends upon a shared responsibility between researcher and practitioner. For the child living in a family in which he is constantly abused, it is of little importance to know that there are hundreds of studies going on at the present time attempting to determine the interactional and personality correlates of such behaviour. To the child experiencing a learning disability, it is irrelevant that numerous studies are being conducted at this very moment which might assist his teacher in developing techniques to meet his educational needs. The time lag between the collection of data by the researcher and the ultimate translation of the data to effective practice is far too lengthy. It is an increasing concern of researchers and practitioners alike that this time lag be shortened and that the applications of research data be ones that somehow enrich the human potential of our children. An increase in the benefits of research to children appears to depend on changed behaviour of researchers and practitioners alike.

Three areas are of particular concern to researchers and educational practitioners. These centre around the selection of research areas, the interpretation of research findings, and the application of these findings.

Selecting research topics can be the sole responsibility of the researcher or it can be a joint effort of researchers and practitioners. The potential advantages of cooperative work are many. Increased identification of problematic situations worthy of study, establishment of rapport between the two groups, and clearer conceptualization of the process of formulating research questions from practical concerns are illustrative of the benefits of closer work between researchers and practitioners. Joint involvement often leads to increased commitment to the goals of both research and practice.

With regard to the interpretation and application of research findings, researchers often worry that practitioners do not understand the research process well enough to appreciate the limits of generalizability, and thus become frustrated in attempting to apply the results of a single piece of research rather than fitting this work into a composite picture. Practitioners must come to realize the value of deriving generalizations or propositions from several studies of the same phenomenon. Researchers, however, have a responsibility to encourage this behaviour by replicating more studies and increasing the number of review articles which have as their main objective the derivation of such propositions. Just as a researcher might be challenged to test the propositions posed in such a review, so might the practitioner be led to refine them into useable teaching strategies.

International Year of the Child provides the appropriate stimulus to enlist the joint involvement of researchers, teachers, and parents to create environments which truly benefit children. A healthy dialogue between researchers and practitioners will contribute much to the achievement of this goal.

Reference

United Nations. *International Year of the Child*. Mimeographed brochure. New York: International Year of the Child Secretariat, no date specified.

ANDREW S. HUGHES
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Curricular Knowledge Organization and Variations in Instructional Emphases

This study was designed to examine the relationship between the use of collection and integrated curricular knowledge organizations and the relative emphasis given selected aspects of instruction. Data from five independently conducted case studies were collected by trained observers employing a classroom observation category system designed for the purposes of the study. The findings suggest that "instructional intent" and the conditions of "knowing that" are independent of the curricular knowledge organization in use, while there does exist a relationship between "form of inquiry" and "paradigm of activity." (Dr. Hughes is Assistant Director of the Atlantic Institute of Education, Halifax.)

The problem of how best to organize knowledge for the purposes of instruction is one which has been perennially puzzling for the curriculum scholar. Whether the structure of the curriculum should reflect a separate-subjects organization of knowledge, or the more encompassing "forms" of knowledge, or whether indeed the curriculum should reflect some other manner of organizing knowledge for instruction, are among the questions to be confronted continually. However, while the choices available have clearly been numerous, the school curriculum, particularly at the secondary school level, has traditionally reflected a separate-subjects approach to organizing knowledge for instruction, perhaps more through inertia than through rational selection. And indeed, it would seem that the "disciplines . . . have been reified and institutionalized to such an extent that in curriculum planning we have difficulty thinking beyond them" (Wise, 1966, p. 276).

From time to time, however, there have arisen challenges to the traditional organization, challenges which have resulted in curricula frequently characterized as interdisciplinary or integrated. Such curricula have tended to be varied. They possess in common only the negative attribute of opposition to subject divisions or subject barriers as these are traditionally conceived (Pring, 1973). Their opposition is founded in the belief that the separate-subjects curriculum fosters "a fatal disconnection" (Caswell, 1962, p. 108), that it "fragments a student's world view" (Fraenkel, 1970, p. 376), and that it results in "the creation of a mind torn against

itself" (Wise, 1966, p. 392). These outcomes, it is claimed, are the results of the "artificial barriers" (Salt, 1969, p. 23), "separate compartments" (Taylor, 1970, p. 69), and the "artificially circumscribed packages of information" (Kerr, 1968, p. 26) which characterize the separate-subjects curriculum. Implicit in the argument is the belief that any curricular organization of knowledge which diminishes the strength of the barriers between subjects will inevitably promote the opposite and more desirable effects by permitting the student exposure to what Marashio (1971) has termed the "full dimensional learning experience" (p. 252).

For the most part, however, the assertions represent expressions of faith rather than conclusions based upon evidence. By and large it is ignored that, to the present time, it has not been demonstrated that there is any "a priori theoretical advantage of interdisciplines over disciplines, no matter how we slice them" (Cameron, 1965, pp. 309-310). Nor has it been shown that there is any "empirical evidence to justify any type of discipline curriculum selection and organization — single, correlated or multidisciplinary, broad unified, fused or interdisciplinary — as compared with another" (Rice, 1973, p. 11).

Nevertheless, the literature remains full of the polemics of curriculum organization, all of it based on the assumption that the manner in which knowledge is organized for instruction does, in some measure, constrain the possibilities afforded by the instructional situation, with the resulting learning experiences being different in their major characteristics (Faix, 1964; Montebello, 1964).

The present study was undertaken to subject the assumption to an initial empirical examination. The critical question addressed by the study is: Does there exist a relationship between the manner in which knowledge is organized for instruction and the properties exhibited by the instructional system in which it is situated? Essentially, the task was one of determining whether a student's learning experience is likely to differ in any of its major characteristics as the result of being associated with one type of knowledge organization as opposed to another.

Curricular Knowledge Organizations

It may readily be seen that there are a number of possible ways in which knowledge may be organized so as to help the individual create meaning out of the apparent anarchy of events; the "blooming, buzzing confusion" of Whitehead. There is that organization reflected in the divisions of the Comtian hierarchy and based upon "subject matter" (Comte, 1877), or that based upon Plato's divided line (Cornford, 1967), or Aristotle's four causes. More recently there is that organization found in Tykociner's (1964) zones and areas of knowledge, Hirst's (1965) fields and forms, Phenix's (1964) realms of meaning, and Clark's (1972) general ecology of knowledge.

Recognizing that there are a number of possible ways in which knowledge may be organized, the curriculum builder is faced with the problem of deciding which organization or organizations to select for the purposes of instruction. However, while a wide variety of possibilities for knowledge organization is available to curriculum designers, the choice, in effect, has been historically limited to two, both employing subject matter as

reflected in the Comtian hierarchy as the criterion of categorization. Indeed, the predominance of these two choices has been so evident in curriculum design that it can be suggested that there are two ideal-typical ways in which knowledge may be organized so as to constitute a curriculum. These have been referred to by Bernstein (1971) as educational knowledge codes of the collection and integrated types.

In order to explicate the nature of the codes, Bernstein employs the concept of "classification." Classification, he points out

> . . . does not refer to *what* is classified, but to the relationships between contents. Classification refers to the nature of the differentiation between contents. Where classification is strong, contents are well insulated from each other by strong boundaries. Where classification is weak, there is reduced insulation between contents for the boundaries between contents are weak or blurred. *Classification thus refers to the degree of boundary maintenance between contents.* (p. 49; italics in original)

Where classification is strong, i.e., where contents are clearly bounded and well insulated, standing in a closed relation to each other, the knowledge code is of a *collection* type. Where contents stand in an open relation to each other, with weak or nonexistent boundaries, the knowledge code is of an *integrated* type.

A collection code of the ideal type would appear to exist where a curriculum consists solely of subjects each of which corresponds to a recognized discipline. An integrated code of the ideal type would exist where previously insulated subjects are subordinated to a relational idea which blurs the boundaries between them. Clearly, however, the ideal states will rarely obtain in the existential situation. Nevertheless, it is possible to observe various forms of collection and integration in school classrooms. For example, some measure of integration can be recognized where "knowledge is grouped for pedagogical purposes in four major categories — the natural sciences, the social sciences, mathematics and the humanities" (Bellack, 1965, p. 323). A total curriculum organized in this fashion is rare, but a partial representation is frequently found where the individual social sciences receive consideration as "social studies," the individual identity of each discipline being subordinated to a major relational idea, i.e., the need to explain man's social life.

By comparing the properties of instructional systems (herein referred to as the instructional systemics) employing variously the "social studies" and the separate social science subjects, it was sought to provide an empirical base from which to view the broader problem. The "social studies" and the separate social science subjects were, therefore, viewed as representing a special case of the general phenomenon, the "social studies" representing a measure of integration, and the separate social science subjects a measure of collection.

Defining the Instructional System

The present study was undertaken to investigate the relationship between the curricular knowledge organization (knowledge code) employed in an instructional situation and the characteristics displayed by that situation. From the infinite number of variables in operation, four were selected for particular consideration. These were labelled (a) the

instructional intent, (b) the conditions of "knowing that," (c) the form of inquiry, and (d) the paradigm of activity. Each was considered as constituting a significant dimension of the instructional process in any classroom, and the social studies or social science classroom in particular.

Instructional Intent

Generally speaking, it may be asserted that a major task of schooling is that of having students acquire knowledge. It is this acquisition of knowledge which comprises the school's "instructional intent." Frequently, however, it would appear that schools function according to a rather constrained view of what it is that constitutes knowledge. Often the definition to be inferred from their operations is one of "a rhetoric of conclusions" (Schwab, 1960, p. 185) to be transferred to the student. It is a conception which emphasizes the acquisition of a "compendium of information" (Parker & Rubin, 1966, p. 1) and tends to neglect those cognitive processes which focus upon the creation, utilization, and communication of knowledge.

This distinction, drawn by Ryle (1949) between *knowing that* something is the case and *knowing how* to do something, implies a logical difference between the possession of information and the possession of skills. In the context of the present study the distinction has a particular heuristic value, permitting a ready dichotomization of the notion of instructional intent.

Conditions of "Knowing That"

To claim to know that something is the case may not be simply a question of stating that "such and such is false and so and so is true" (Fen, 1966, p. 164). Nevertheless, many of the knowledge claims that are made, particularly in social studies classes, do appear to adhere to this limited conception (Massialas & Sprague, 1974). A knowledge claim of this type has been termed knowing that in the *weak sense,* and is to be contrasted with knowing that in the *strong sense* (Hintikka, 1962, pp. 18-19) in which case the person claiming to have knowledge must go beyond the initial assertion of what is the case, providing justification for the assertion.

The distinction between knowing that in the *weak sense* and knowing that in the *strong sense* is one employed by Scheffler (1965) who points out that "in the weak sense, knowing that depends solely in having true belief; in the strong sense it requires something further — for example, the ability to back up the belief in a relevant manner, to bring evidence in its support" (p. 9). The conditions of knowing that in the two senses are clearly different. In the *weak sense* there is only the condition of belief; in the *strong sense,* in addition to the condition of belief, there is the condition of evidence, providing what Ayer (1956) calls the right to be sure. Knowing that in the *strong sense*, therefore, is a condition of warranted belief (Conklin, 1967). Conversely, knowing that in the *weak sense* is a condition of unwarranted belief.

The Forms of Inquiry

The importance of knowing as an objective in the educative process has been emphasized with respect to the instructional intent and the conditions of "knowing that." It is not a notion, however, which may be usefully

employed to describe the day to day activities of teachers and students. Knowing can be viewed as an objective which may serve to guide activities, and when attained it is an achievement fulfilling certain conditions; it is not a kind of mental operation or activity (Ryle, 1949, p. 16 ff.). Day to day instructional activities may be usefully interpreted in terms of the conscious effort to gain knowledge, that is, in terms of the process of inquiry. That is not to say that all knowledge is the result of deliberate inquiry. Clearly, much of what we know we have not deliberately set ourselves to find out (Scheffler, 1965, p. 32), but schooling is a purposive activity in large measure concerned with the attainment of knowledge, and in this context inquiring may be seen to be the "subservient task activity" to knowing.

Morris (1964), in his work on semiotic, has suggested that there are three main types of problems to which inquiry may be directed: (1) problems of what has happened, is happening, or will happen, (2) problems of what to do, and (3) problems of what to accord preferential behaviour. Morris further points out that inquiry will terminate in three different kinds of assertion with respect to these three different kinds of problems. Inquiry into what has happened, is happening or will happen terminates with designative statements and is referred to as *designative inquiry*. Inquiry into what to do terminates with prescriptive statements and is referred to as *prescriptive inquiry*. Inquiry into what to prefer terminates with *appraisive inquiry* (Morris, 1964, p. 26). While conceptually distinct, the forms of inquiry are not separate and, while engaged in any one of them, "one uses the other forms of inquiry at various stages of the process" (Morris, p. 28). The forms of inquiry, therefore, may be regarded as phases of, and emphases within, a more general process of inquiry, considered here as a reflective process involving a transaction between a display and an inquirer, and directed toward solving a problem. (The notion of "display" employed here is derived from Aoki, 1970; Dewey and Bentley, 1949; Jackson, 1966; and Johnson, 1969; and is used to refer to the selected segments of the environment given symbolic representation in the educational knowledge codes.) It is this transaction between student and display which, for the purposes of the present study, is seen as crucial in the instructional situation.

While a distinction may be drawn between prescriptive and appraisive inquiry, it is also possible to regard them as collectively constituting *evaluative* inquiry as opposed to designative inquiry which is *nonevaluative*. It is this latter distinction, i.e., between valuative and nonevaluative inquiry, which was drawn upon extensively in the study. Again, it should be recognized that these distinctions are emphases within a more general process of inquiry. In evaluative inquiry, the inquirer is concerned with deciding upon a preferential course of behaviour, with identifying the objects and actions which will receive preferential consideration. In order to make his decisions, he will be dependent upon accurate information which can only be acquired through designative inquiry. In this way, nonevaluative or designative inquiry can be viewed as a phase, albeit a prerequisite phase, in the process of evaluative inquiry.

Paradigm of Activity

It has been noted in the previous section that the fundamental interaction in the process of instruction may be viewed as taking place not among people but between the individual and the "display." However, it was further noted that the instructional transaction is mediated by the "instructor" who may be personally present or absent from the instructional situation, i.e., he may be a teacher actively engaged in instructing children in a classroom situation, or he may be the "author" of materials employed by students in the process of inquiry. In both cases, the instructor, with the student, builds a relationship through which the transaction is mediated. It is the character of this relationship which is considered under the heading of "paradigm of activity." As used here, the idea of a "paradigm" is descriptive rather than prescriptive, and refers to the major characteristics exhibited by a given phenomenon, the phenomenon in this case being the relationship through which the classroom transaction is mediated. In the restricted sense of the study, a paradigm of activity was considered to be that dominant pattern of interaction, or way of proceeding, which is reflected in the authority relationships existing between the display and/or teacher, and the student.

The importance of authority relationships, particularly those existing between teachers and students, have been emphasized in attempts to describe how classrooms operate (Dreeben, 1972, pp. 457-463). The relationship has been variously characterized along continua, from democratic to autocratic, integrative to dominative, student-centered to teacher-centered. However, the tradition of democratic-authoritarian studies, stemming largely from the work of Lewin (1943) and Lippett and White (1943), has been inconclusive in terms of any measure of classroom effectiveness, especially when the latter has been approached in terms of "productivity" (Anderson, 1959).

While the tradition of research referred to above has focused upon the ideas of a "style of leadership" within a broad context, the conceptions of teacher-regulated and group-regulated classrooms derived from it were of particular value in the present study, permitting a dichotomous consideration of the paradigm of activity. This was particularly important in view of the fact that one dimension of the dichotomy, the teacher-centered, has tended to be associated with an educational knowledge code of the collection variety and the other, the group-regulated, with an integrated code.

Method

The research design provided for five separate and independently conducted naturalistic and quantitative case studies. In each of the cases the relationship obtaining between the curricular knowledge organizations employed and the other elements of the abstracted instructional system was examined, and invariances across cases were mapped. It was hypothesized that there exists a relationship between the knowledge code employed in an instructional situation and the relative emphasis given to: (i) *knowing how* and *knowing that,* (ii) "knowing that" in the *weak sense* and "knowing that" in the *strong sense,* (iii) *evaluative* inquiry and *nonevaluative* inquiry, (iv) *teacher-centered* activity and *group-regulated* activity.

Sample

Each case was composed of two intact classes, one categorized as employing a collection knowledge organization and the other categorized as employing an integrated knowledge organization. The total sample was comprised of ten intact classes selected through purposive sampling, i.e., classes were selected because they exhibited the attributes relevant to the study.

The use of an equal probability of selection method with such a small sample would not have provided any useful measure of control over teacher style which was viewed as a potentially confounding variable. Through purposive sampling it was possible to identify those teachers who were employing an integrated knowledge organization in one classroom situation and a collection knowledge organization in another classroom at the same grade level. It was hoped that the selection of two classes taught by the same teacher would provide a measure of control over variation in "teacher style" within a single case. An attempt to involve precisely the same students in the two classes comprising each case was aborted when no such instances were found to exist, and only intact classes could be selected. Of the classes which ultimately composed the sample the degree of overlap in student participation in the two situations ranged from 0 to more than 60 per cent.

An initial pool of 14 teachers in six school districts in central Alberta was identified. The teachers comprising the initial pool were those involved in teaching both social studies and one of the social science options (geography, psychology, or sociology) at the grade eleven level. It was thought that the social studies courses might prove to be a source of classes employing integrated knowledge organizations, and social science courses a source of classes employing collection knowledge organizations. An analysis of the courses led to five teachers being tentatively identified as employing an integrated knowledge organization in their social studies classes and a collection knowledge organization in their social science classes.

The basis of discrimination between the integrated and collection knowledge organizations was linked to the concept of "classification" which refers to the strength of boundaries between contents. Boundaries are designated weak when a number of perspectives (psychological, sociological, economic, etc.) are brought to bear on a single topic or problem being considered by a class, and thereby constitute an integrated knowledge organization. Boundaries are designated strong when a topic or problem is considered from a single perspective (i.e., psychological *or* sociological *or* economic, etc.) and result in a collection knowledge organization.

Classes were categorized following an examination of textual materials (textbooks, handouts, resource units, assignments and examinations) and observations of the classrooms in action. However, the tentative nature of the initial sampling must be stressed. It was a concern at this point in the development of the study that teacher behaviour with respect to the use of integrated and collection knowledge organizations might be extremely variable over time, though this proved not to be the case. A strict monitoring of classes in terms of content "classification" was, therefore, conducted during the period of data collection.

The ultimate composition of the five cases involved 10 classes, five of which were grade eleven social studies and five of which were social science options. The five option classes were two sociology, two geography, and one psychology. All the teachers were male, having a range of experience from one to twelve years, and of academic qualifications from three years of university to a master's degree. Two of the case studies were conducted in a suburban high school, two in small town high schools, and one in a small rural school. In total the study involved 186 students ranging in age from 14.8 to 18.7 years from a wide range of socioeconomic backgrounds, with approximately equal numbers of males and females.

Instrumentation

Data were collected by five trained observers employing the *System for the Analysis of Classroom Transactions*[1], a multidimensional category system designed to permit the quantitative description of classroom transactions in terms of the variables relevant to the present study by means of direct observation.

The SACT was developed in order to permit a description of classroom behaviour in terms of instructional intent, conditions of "knowing that," form of inquiry, and paradigm of activity, each of which is represented in the system in terms of dichotomous categories.

For purposes of coding, the units of analysis of the SACT are "analytic" rather than "phenomenal" (Biddle, 1967) and are referred to as *ventures*. The term is used to delineate a unit of classroom interaction which focuses upon a single notion or subject or topic. When there is a shift away from one focus of attention to another, (from one topic to another, or from one aspect of a topic to another) a change of ventures is deemed to have taken place. Typically, a social studies or social science class of approximately 80 minutes can be expected to produce between 15 and 30 ventures.

As indicated, each venture may be classified along each of the four dimensions of the system. For example, in a venture which consists of

TABLE 1
DIMENSIONS AND CATEGORIES OF THE SACT

Dimensions	Categories
Instructional Intent	Knowing How Knowing That
Conditions of "Knowing That"	Strong Weak
Form of Inquiry	Evaluative Nonevaluative
Paradigm of Activity	Teacher-Centered Group-Regulated

student A asking student B to justify his assertion that Canada should prohibit further immigration by people of nonwhite racial origin, and receiving an appropriate response, the pattern of classification would be: (i) knowing that, (ii) strong sense, (iii) evaluative inquiry, and (iv) group-regulated. However, since the SACT is a category system, observers are frequently called upon to make judgements requiring high levels of inference. In order to increase the validity and reliability of such high inference judgements, a number of "significant indicators" (in effect, low level signs) for each category have been identified to provide guidance for observers.[2]

Five persons, one of whom was the researcher, were used as observers. Before data collection the observers engaged in approximately 15 hours of training using the SACT. With observers having no training whatever and being provided with only the names of the categories and a single statement description for each dimension of the system, the coefficients of inter-observer reliability[3] ranged from 0.56 to 0.81 with a median of 0.66. After training, using transcripts, and audio and video recordings of classroom interaction, the coefficients ranged from 0.93 to 1.00 with a median of 0.97. At the end of the 50-day period of data collection, coefficients of inter-observer reliability ranged from 0.76 to 0.97 with a median of 0.81.

Intra-observer reliability was consistently high during both the training and data collection periods. Intra-observer reliability calculated during a ten-day interval at the end of training yielded coefficients ranging from 0.93 to 1.00 with a median of 0.98. After the 50-day period of classroom observation, coefficients ranged from 0.93 to 0.98 with a median of 0.95.

Procedures

Data in each of the cases were collected by one of the observers. Each of the two classes comprising each case study was observed and coded for five periods each of eighty minutes in length. Periods were not randomly selected. Observers, in conjunction with the teachers, selected those periods likely to provide large measures of teacher-student and student-student interaction, thereby excluding those learning activities such as field trips and independent study which are not amenable to analysis using the SACT.

Results and Discussion

The unit of analysis referred to is that unit of classroom discourse referred to in the study as a "venture."

Instructional Intent

In none of the five case studies was there found to be a systematic variation between the relative emphasis placed upon instructional intent of the "knowing how" and "knowing that" types. In both types of classes there was almost exclusive attention given to instructional intent of the "knowing that" type. Of 1,153 ventures analyzed in the five case studies, only 24 (approximately 2 per cent) were classified as "knowing how," and would seem to confirm Soltis's (1968) and Holloway's (1975) assertions that in spite of the considerable concern for process ("knowing how") in the

TABLE 2
CHI-SQUARE TEST OF INDEPENDENCE BETWEEN KNOWLEDGE ORGANIZATION AND INSTRUCTIONAL INTENT

Knowledge Organization	Total Number of Ventures	Instructional Intent		χ^2
		Knowing How	Knowing That	
Case Study I				
Integrated	109	0	109	
Collection	94	0	94	--
Case Study II				
Integrated	108	5	103	
Collection	116	0	116	3.58
Case Study III				
Integrated	133	10	123	
Collection	130	6	124	0.53
Case Study IV				
Integrated	149	1	148	
Collection	73	2	71	0.40
Case Study V				
Integrated	124	0	124	
Collection	117	0	117	--

Critical value of χ^2 (df = 1) at $p < 0.05 = 3.84$.

literature, "knowing that" is *the* basic type whether the mode of curricular knowledge organization is collection or integrated.

The Conditions of "Knowing That"

In three of the case studies (I, II, and III) there was found to be no difference between the integrated and collection classes with respect to the emphasis placed upon "knowing that" in its strong and weak senses. In cases IV and V, differences were observed ($p < .01$ and $< .001$ respectively). In both of these latter instances it was found that ventures categorized as "knowing that" in the *weak* sense occurred to a significantly greater degree in the integrated classes, although the proportion of weak to the total number of ventures was less than in either case study I or II, in which no difference between collection and integrated classes were observed.

The lack of consistency of findings among cases suggests that there is no systematic variation in the relative emphasis given "knowing that" in its *strong* and *weak* senses between classes employing collection and integrated knowledge codes.

The Form of Inquiry

In four of the case studies it was found that a significantly greater emphasis was placed upon evaluative inquiry in the integrated classes than

TABLE 3
CHI-SQUARE TEST OF INDEPENDENCE BETWEEN KNOWLEDGE ORGANIZATION AND THE CONDITIONS OF KNOWING THAT

Knowledge Organization	Total Number of Ventures	Conditions of Knowing That		χ^2
		Strong Sense	Weak Sense	
Case Study I				
Integrated	109	74	35	
Collection	94	69	25	0.50
Case Study II				
Integrated	103	103	0	
Collection	116	112	4	1.95
Case Study III				
Integrated	123	90	33	
Collection	124	98	26	0.87
Case Study IV				
Integrated	148	130	18	
Collection	71	71	0	7.87*
Case Study V				
Integrated	124	104	20	
Collection	117	117	0	18.51**

* $p < .01$
** $p < .001$

was the case in collection classes. The findings would seem to lend some measure of support to the hypothesis that there exists a relationship between the curricular knowledge organization employed and the relative emphasis given to evaluative and nonevaluative inquiry. However, the finding is somewhat confounded by the fact that the social studies curriculum of the Province of Alberta is explicitly "valuing-oriented" and the emphasis on valuative inquiry in the integrated classes (all of which were social studies) may be related more to this curricular orientation than to the curricular knowledge organization employed.

The Paradigm of Activity

In all five case studies significant differences were observed between the collection and integrated classes in terms of the numbers of ventures classified as *teacher-centered* or *group-regulated*. In four cases it was found that *group-regulated* ventures occurred to a significantly greater extent in the integrated classes. In a single case (case study II), it was found that group-regulated ventures occurred to a significantly greater degree in the collection class.

The high proportion of teacher-centered to group-regulated ventures in the collection classes tends to confirm the findings of Bellack (1966) and Hughes (1968) that teachers make little use of student ideas and that the

TABLE 4
CHI-SQUARE TEST OF INDEPENDENCE BETWEEN KNOWLEDGE ORGANIZATION AND FORM OF INQUIRY

Knowledge Organization	Total Number of Ventures	Form of Inquiry		χ^2
		Evaluative	Nonevaluative	
Case Study I				
Integrated	109	36	73	
Collection	94	9	85	14.76**
Case Study II				
Integrated	108	8	100	
Collection	116	15	101	1.3
Case Study III				
Integrated	133	32	101	
Collection	130	18	112	3.82*
Case Study IV				
Integrated	149	13	136	
Collection	73	0	73	5.27*
Case Study V				
Integrated	124	16	108	
Collection	117	0	117	14.2*

* $p < .05$
** $p < .001$

fundamental paradigm of classroom activity is one of teacher initiation and student response. On the other hand, the findings in the integrated classes suggest that while the teacher clearly exerts a controlling influence over instructional activities, an important proportion of instructional activities is, in fact, regulated by the group. The evidence from the cases studied might be taken to indicate that the collection classes, based on clearly bounded disciplines, are more constraining than integrated classes in terms of the possibilities afforded in the instructional situation.

Summary and Conclusions

The focus of this investigation derives from a frequently expressed concern in curriculum discourse that the traditional separate-subjects approach to organizing knowledge for instruction is no longer adequate. The argument usually advanced by opponents of the separate-subjects approach is that such subjects are fragmentary and compartmentalized; that there is a need to proceed beyond that curriculum design characterized as "a process of layering society's new knowledge and arranging for feeding it." Further, they would claim that together with other societal tendencies toward specialization, they have resulted in a "depersonalization and demoralization, disintegration, and disorientation, the brink of world holocaust and the brink of ecological suicide, the alienation of

TABLE 5
CHI-SQUARE TEST OF INDEPENDENCE BETWEEN KNOWLEDGE ORGANIZATION AND THE PARADIGM OF ACTIVITY

Knowledge Organization	Total Number of Ventures	Paradigm of Activity: Teacher-Centered	Paradigm of Activity: Group-Regulated	χ^2
Case Study I				
Integrated	109	43	66	
Collection	94	81	13	44.4***
Case Study II				
Integrated	108	69	39	
Collection	116	51	65	8.1*
Case Study III				
Integrated	133	87	46	
Collection	130	102	28	4.91*
Case Study IV				
Integrated	149	54	95	
Collection	73	55	18	28.43***
Case Study V				
Integrated	124	79	45	
Collection	117	104	13	19.52***

* $p < .05$
** $p < .01$
*** $p < .001$

instructionalized man and the deprivation of the human spirit" (Haas, 1975, p. 5).

The present study sought to determine whether the process of education in classes using collection (separate-subject) knowledge organizations was likely to differ in any of four dimensions from classes using integrated knowledge organizations. The results clearly indicate that there is no difference between collection and integrated classes in terms of "instructional intent" or "the conditions of knowing that." The results concerning the "form of inquiry" and the "paradigm of activity" suggest that evaluative inquiry and group-regulated activity are likely to receive greater emphasis within the integrated classes. However, the results of the case studies, viewed collectively, would seem to indicate that any assertion claiming the mode of knowledge organization as a variable controlling and shaping the nature of instructional systems in some inexorable fashion is clearly untenable. At best, it is one of a number of variables shaping the situation.

The debate concerning how knowledge ought to be organized for the purposes of instruction is inevitably linked to conceptions of how and what people ought to be. Basically, there appear to be three assumptions. The first is that integration is a "good" thing, whether in the sense of integrated

days, integrated subjects, racial integration, an integrated personality, or even integrated circuits. Consequently, people ought to be "integrated" quite simply because the idea connotes something positive, as opposed to its opposite, segregation or possibly disintegration, which connotes something negative. The second assumption is that the knowledge organization with which any individual transacts is a contributory factor in the process of becoming "integrated." Finally, it is assumed that knowledge organizations, which are in themselves more integrated, contribute to the integration of individuals. It might well be, however, that knowledge organizations that are already integrated rob the inquirer of the experience of integrating and place him in the role of the passive consumer. Knowledge organizations that are not already integrated may force the student into dynamic inquiry, seeking to create meaning out of the "great, blooming, buzzing confusion."

Notes

1. Copies of the *SACT* and *Guidelines for Observers* may be obtained directly from the author.
2. See *System for Analyzing Classroom Transactions: Guidelines for Observers.*
3. The coefficient of inter-observer reliability was arrived at using procedures advocated by Smith, Meux, Coombs, and Nuthall, in "A Tentative Report on the Strategies of Teaching," Bureau of Educational Research, College of Education, University of Illinois, Urbana, n.d., p. 41.

$$C = \frac{A_1 + A_2}{B_1 + B_2}$$

C = Coefficient of agreement

A_1 = The number of ventures assigned to a particular category by observer #1 which are also assigned the same category by judge #2.

A_2 = The number of ventures assigned to a particular category by observer #2 which are also assigned the same category by judge #1.

B_1 = The total number of ventures identified by observer #1

B_2 = The total number of ventures identified by observer #2

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The Curriculum Decision-Making Preferences of School Personnel

The decentralization of curriculum decision-making, which has been accepted in principle in many provinces, depends upon the participation of school personnel at local levels. This article explores the probable extent of participation of school personnel in curriculum decision-making by presenting data regarding: (a) preferences for seven kinds of curriculum work, (b) preferences for five levels of curriculum decision-making, and (c) perceptions of the attractiveness of curriculum work. The data were collected by means of a measuring instrument which was distributed to personnel in 174 public and separate schools in Alberta. The 1,268 respondents and the 139 schools in which they worked were found to be representative of school personnel and schools throughout the province, thereby increasing the generalizability of the findings. Distinct preferences for the seven kinds of curriculum work and the five levels of curriculum decision-making are identified in the article as well as the prevailing attitude toward participation. Implications of the findings for the probable extent of participation of school personnel in curriculum decision-making are discussed. (Dr. Young is Associate Professòr in the Department of Elementary Education at The University of Alberta.)

In recent years, a trend has developed across Canada to decentralize curriculum decision-making. Driving forces behind the trend are the increasing professionalism of teachers, the desire of stake-holders in education to participate in decision-making which affects their schools and children, and the positive outcomes of well-publicized local curriculum projects.

Using the province of Alberta as an example, evidence of these forces can be found in policy statements of The Alberta Teachers' Association (1976), recommendations resulting from a major conference of stakeholders in Alberta education ("Curriculum Decision-Making in Alberta," 1974), and the local curriculum work of Project Canada West (Miller & Dhand, 1973).

The trend to decentralize curriculum decision-making was initiated by educational policy makers in Alberta and other provinces. However, the

long term success of the trend depends not on the policy makers, but on the thousands of school personnel whose participation at local levels is a basic requirement of decentralization. As Sullivan points out: "Decentralization of curriculum development has as a major tenet the systematic increase in decision-making responsibilities for teachers and principals" (1975, p. 15).

However, the orientation of school personnel appears to be toward instructional rather than curricular concerns. For teachers in particular, the working day revolves around the exigencies of classroom life. Morrison, Osborne, and McDonald (1977) point out that, as a result, a teacher's informational field regarding curriculum matters is quite restricted. Bounded by the four walls of his classroom, the teacher maintains few external contacts with professionals in his own or related fields. Nor does he have time to visit new programs or projects.

It is not surprising, then, that teachers in a study by Olson and Kitto (1977) gave lip service to the importance of curriculum development but devoted very little time to it. Furthermore, there is evidence that additional time to participate in curriculum decision-making would not necessarily counteract the strong orientation of teachers toward instruction. For example, when Lortie (1975) asked teachers what they would do with a gift of additional work time, he found that they would spend it on activities directly related to their individual classrooms rather than to broader curriculum development work.

On a more positive note, teachers in a recent study by Ponder and Bulcock (1976) expressed a desire for greater participation in curriculum decision-making. It is interesting to note, however, that the greatest discrepancy between actual and desired participation occurred with respect to determining texts and instructional material — a kind of curriculum work which has immediate implications for classroom activities. The discrepancy was considerably smaller for determining the basic outline and detailed content of a curriculum.

To what extent, then, can school personnel be expected to participate in curriculum decision-making? Data drawn from a recent study of the curriculum decision-making preferences of Alberta school personnel approach this question from three different perspectives (Young, 1977).

First, the kinds of curriculum work that are attractive to school personnel are identified. The term "curriculum decision-making" is a very broad concept which masks the possibility that there are different kinds of curriculum work, each one requiring a specific set of decisions. It is possible that school personnel are more willing to participate in certain kinds of curriculum work than in others. Findings of this nature have implications for the scope of participation of school personnel in curriculum decision-making.

Second, the levels at which school personnel wish to perform the various kinds of curriculum work are identified. Curriculum decision-making can be decentralized to different levels: regions of a province, school districts, schools, and individual classrooms. School personnel may welcome responsibility for particular kinds of curriculum work in their schools, but believe that other kinds of curriculum work would be more appropriately performed at other levels. In that case, the extent of participation of school

personnel will vary according to the kind of curriculum work that is proposed.

Third, the attitudes of school personnel toward the opportunity to become more active in curriculum work are identified. Some school personnel may welcome the opportunity, while others react in a "Well, if I *have* to" manner. Still others may refuse to become more active in curriculum work.

Specifically, then, this article explores the probable extent of participation of school personnel in curriculum decision-making by identifying:

1. Preferences for seven kinds of curriculum work.
2. Preferences for five levels of curriculum decision-making.
3. Perceptions of the attractiveness of curriculum work.

The study from which the data were drawn was intended to be exploratory in nature and to provide information which educators with a stake in decentralized curriculum decision-making may use to direct the course of decentralization in their provinces.

Method

Conceptualization of Curriculum Decision-Making

The problem underlying this study was the prediction of the probable extent of participation of school personnel in curriculum decision-making. In order to solve that problem, it was necessary to operationalize the ambiguous term "curriculum decision-making" for research purposes.

The researcher, therefore, identified seven kinds of curriculum work around which the many curriculum decisions are clustered. Two criteria were used to determine inclusion of a particular kind of curriculum work.

The first criterion was consistency with the definition of curriculum as *a plan outlining the objectives and content of a subject which is available to learners in school.* This definition adheres to the viewpoint that there is a difference between curriculum and instruction. That is, curriculum decision-making takes place before a teacher interacts with students in his classroom (Beauchamp, 1975; Johnson, 1969).

The second criterion was potential performance of the curriculum work at any level of decision-making within a province: *province, region, school district, school,* and *classroom.* On a continuum ranging from highly centralized (province) to completely decentralized (classroom), each level represents an additional step in the decentralization process.

Seven kinds of curriculum work met the criteria. Five kinds pertain to individual subjects — creating a curriculum, selecting a curriculum, adapting a curriculum, translating a curriculum into instruction, and winning support for a curriculum. A sixth kind of curriculum work — organizing a total program — is concerned with the relationships among individual subjects. The final kind of curriculum work — evaluating curriculum decision-making — applies either to an individual subject or to the total program of which each subject is a part.

The validity of the conceptualization was supported by the fact that school personnel who participated in pilot testing the measuring instrument

based on the conceptualization had no difficulty recognizing the different kinds of curriculum work and distinguishing between them.

The Measuring Instrument

The conceptualization served as the basis for construction of a measuring instrument. The format was that of a simple brochure which could be self-administered in ten minutes or less. The contents were tested and revised during three stages of pilot testing with Alberta school personnel.

The cover page of the brochure advertised the possibility of "Workshops on Curriculum Decision-Making." One side of the brochure contained brief descriptions of seven workshops corresponding to the seven kinds of curriculum work. The other side of the brochure was a questionnaire in which the respondents listed the three workshops they would be most likely to attend, identified the level of curriculum decision-making they would like each workshop they chose to concentrate on, and indicated whether the opportunity to become more active in curriculum work was "very attractive," "somewhat attractive," or "not attractive." The remainder of the questionnaire consisted of multiple choice questions regarding the respondents' school situations, types of employment, and professional backgrounds.

The workshop format was chosen in order to avoid the frequently glib responses associated with checklists and to give a more realistic setting for data collection. Although the respondents made no actual commitment to attend a workshop, the possibility of future commitment existed. This possibility was enhanced by the fact that the measuring instrument was sent to respondents under the auspices of The Alberta Teachers' Association. There is also some evidence that teachers regard workshops favourably. For example, teachers in the Olson and Kitto study (1977) perceived workshops as having the second most potential (after "other teachers") for helping them with curriculum work.

The Study Sample

Theoretically, a random sample of school personnel throughout the province would lead to the greatest generalizability of the findings. However, discussion during pilot testing indicated that the return from a direct mailing would be low. Therefore, a random sample was drawn from the public and separate schools of the province. A total of 174 schools, or 15% of the population, was selected. The measuring instrument was then distributed in each school to full-time personnel with valid Alberta teaching certificates by The Alberta Teachers' Association representative in that school.

Administrators, librarians, and guidance counselors, as well as teachers, received the measuring instrument. Thus, the term "school personnel" refers to educators who fill a variety of positions in the individual schools of a district.

A total of 139 out of 174 randomly-selected schools participated in the study. These schools represented 80% of the study sample. A total of 1,292 individuals completed the measuring instrument, representing

approximately 50% of the personnel in participating schools. Fully 98% of the questionnaires (or 1,268) were usable, attesting to the quality of the pilot testing procedure.

If generalizations were to be drawn regarding the attitudes of school personnel toward curriculum work, it was important that the study respondents be representative of school personnel throughout the province. Therefore, the respondents' characteristics were compared with the characteristics of school personnel throughout Alberta as indicated by data supplied by the Alberta Department of Education (1976).

The schools in which the respondents worked were found to be representative with respect to type of school, size of community, and size of school. The individuals who participated in the study were representative of Alberta school personnel with respect to role, years of employment in schools, years of postsecondary education, and sex. The overall conclusion was drawn that the respondents may be considered representative of the general population of Alberta school personnel.

Results

This section identifies the preferences of school personnel for seven kinds of curriculum work and five levels of curriculum decision-making as well as perceptions of the attractiveness of curriculum work. Since 79.9% of the respondents were classroom teachers, the findings are dominated by their point of view. The responses of administrators, librarians, and guidance counselors differed to some extent from those of classroom teachers. However, only the aggregate responses are reported in this section.

Preferences for Seven Kinds of Curriculum Work

The relative popularity of the seven kinds of curriculum work, as indicated by choices of workshop, is shown in Table 1. The table records the number of times each workshop was chosen by combining first, second, and third choices. Both absolute numbers and percentages are given. The total

TABLE 1
DISTRIBUTION OF PREFERENCES FOR SEVEN KINDS OF CURRICULUM WORK[a]

Preference Rank	Kind of Curriculum Work	Absolute Frequency	Percentage of Total
First	Translating a curriculum into instruction	863	24.1
Second	Creating a curriculum	798	22.3
Third	Adapting a curriculum	588	16.5
Fourth	Organizing a total program	530	14.8
Fifth	Selecting a curriculum	400	11.2
Sixth	Evaluating curriculum decision-making	237	6.6
Seventh	Winning support for a curriculum	158	4.4
Total		3574	100.0

[a] Totals of first, second, and third choices

does not equal three times the number of respondents (3 x 1,268) because some respondents chose only one or two workshops rather than three.

The three choices of workshop were given equal weighting. This was consistent with the purpose of the study which was to make broad distinctions among the preferences of school personnel.

Distinct preferences for each of the seven kinds of curriculum work can be identified. These preferences clustered into three groups indicating greatest, least, and an intermediate degree of interest.

Preferences for Five Levels of Curriculum Decision-Making

After the respondents had selected the three workshops they would be most likely to attend, they indicated the levels of decision-making on which they would like the workshops they chose to concentrate. In effect, the respondents were indicating the degree of decentralization they felt was desirable for the seven kinds of curriculum work.

Analysis of the data proceeded in two stages. First, preferences for the five levels of curriculum decision-making were studied without regard for specific kinds of curriculum work. Table 2 records in absolute numbers and percentages the number of times each level was chosen. Again, due to omitted responses, the total does not equal three times the number of respondents.

TABLE 2
DISTRIBUTION OF PREFERENCES FOR FIVE LEVELS OF CURRICULUM DECISION-MAKING [a]

Preference Rank	Level of Curriculum Decision-Making	Absolute Frequency	Percentage of Total
First	School district	923	28.3
Second	Province	752	23.1
Third	School	684	21.0
Fourth	Classroom	469	14.4
Fifth	Region	434	13.3
Total		3262	100.0

[a] Totals of levels selected for all workshop choices

In the second stage of analysis, the level of curriculum decision-making preferred for each kind of curriculum work was identified. Table 3 records in absolute numbers and percentages the number of times each level was chosen for each kind of curriculum work.

This stage of analysis clarified the overall preferences reported in Table 2. It indicated, for example, that the overall preference for the *school district* extends over six different kinds of curriculum work. On the other hand, the overall preference for the *province* as second choice focuses primarily on only two kinds of curriculum work. Curiously, preference for the *school* as overall third choice was not clarified by this stage of analysis. That is,

TABLE 3
LEVELS OF DECISION-MAKING SELECTED FOR THE SEVEN KINDS OF CURRICULUM WORK[a]

Kinds of Curriculum Work	Province		Region		School District		School		Classroom		Totals	
	Abs. No.	% of Row Total	Abs. No.	% of Row Total	Abs. No.	% of Row Total	Abs. No.	% of Row Total	Abs. No.	% of Row Total	Abs. No.	% of Grand Total
Translating a curriculum into instruction	110	14.0	83	10.6	208	26.5	179	22.8	205	26.1	785	24.3
Creating a curriculum	193	26.4	115	15.8	184	25.2	147	20.1	91	12.5	730	22.6
Adapting a curriculum	66	12.6	61	11.6	199	37.9	131	25.0	68	13.0	525	16.2
Organizing a total program	193	39.7	57	11.7	108	22.2	85	17.5	43	8.8	486	15.0
Selecting a curriculum	78	21.8	68	19.0	104	29.1	67	18.8	40	11.2	357	11.0
Evaluating curriculum decision-making	54	25.1	35	16.3	70	32.6	43	20.0	13	6.0	215	6.6
Winning support for a curriculum	35	25.7	14	10.3	49	36.0	29	21.3	9	6.6	136	4.2
Totals	729	22.5	433	13.4	922	28.5	681	21.1	469	14.5	3234	100.0

[a] Totals of all workshop and level choices

respondents apparently did not consider the school as the optimum level for any particular kind of curriculum work.

Perceptions of the Attractiveness of Curriculum Work

After indicating their preferences for seven kinds of curriculum work and five levels of curriculum decision-making, the respondents were asked to complete the sentence "The opportunity to become more active in curriculum work is . . ." with one of three endings: "very attractive to me"; "somewhat attractive to me"; and "not attractive to me." Table 4 records the responses in both absolute numbers and percentages.

TABLE 4
DISTRIBUTION OF RESPONDENTS BY PERCEIVED ATTRACTIVENESS OF CURRICULUM WORK

Perception of Curriculum Work	Absolute Frequency	Percentage of Total
Very attractive	309	24.4
Somewhat attractive	664	52.4
Not attractive	272	21.5
No response	23	1.8
Total	1268	100.0

These data indicate the general degree of interest underlying the preferences displayed in Table 1.

Discussion

The purpose of this article was to explore the probable extent of participation of school personnel in curriculum decision-making. The

findings presented in the previous section suggest that participation will be limited in three respects.

First, the participation of school personnel in curriculum decision-making will be limited by the number of individuals who are willing to participate. The general ambivalence of school personnel toward participation is clearly indicated by: (a) primary preference for translating a curriculum into instruction — a kind of curriculum work which is already an essential part of the lives of school personnel and does not expand their role to include broader curriculum concerns, (b) the preference for the school district level of curriculum decision-making — a safe choice which allows greater participation in curriculum decision-making by school personnel who desire it but does not obligate personnel who are disinterested, and (c) the neutral, middle-of-the-road stance of the majority of respondents who found the opportunity to become more active in curriculum work only "somewhat attractive."

Second, the participation of school personnel in curriculum decision-making will be limited in scope. School personnel are primarily interested in only two kinds of curriculum work. This suggests that they are not prepared at the present time to accept responsibility for the entire range of curriculum decision-making. Whether it is feasible or even possible for school personnel to engage in certain kinds of curriculum work and not in others is a question worthy of consideration.

Third, the participation of school personnel in curriculum decision-making will be limited by characteristics of decision-making at the preferred level of decentralization — the school district. Observation of curriculum decision-making in the context of the school district indicates that a relatively small percentage of personnel employed in the schools of the district are involved in curriculum committees at any one time. In addition, participation usually takes place on an on-again off-again basis as committees are formed and later disbanded. As a result of these two factors, participation in curriculum decision-making will take place *in addition to* the basic work of school personnel rather than as an integral part of it.

Although the findings suggest that the participation of school personnel in curriculum decision-making will be limited by the number of participants, the scope of their work, and the failure to integrate curriculum decision-making into their professional lives, the findings cannot be equated with outright rejection. In fact, there is some evidence that school personnel are taking tentative steps toward greater participation in curriculum decision-making, notably: (a) the second preference for creating a curriculum for a subject which moves school personnel from consideration of *how* to teach to consideration of *what* to teach, (b) interest in the school level of decision-making which typically involves total school staffs, and (c) the "very attractive" response of almost 25% of the respondents to the opportunity to become more active in curriculum work.

It is clear, however, that the decentralization of curriculum decision-making will not simply "happen." Careful planning will be required to increase the limited participation of school personnel projected by these findings. At least three planning possibilities are suggested by the data.

First, the number of potential participants may be increased, not by compelling ambivalent personnel to participate but by capitalizing on the enthusiasm of the 25% who find curriculum work "very attractive." There is evidence that these personnel are most likely to volunteer for local curriculum projects (Anderson, 1975). If the enthusiasm of these volunteers is channeled into projects which have a high chance of success, the resulting publicity may give ambivalent personnel reason to believe that participation in curriculum work can be "very attractive" indeed.

Second, the scope of participation in curriculum decision-making may be increased by focusing initially on the two kinds of curriculum work which school personnel prefer, not only to capitalize on current interest but also because problems may arise during the projects which will lead naturally to other kinds of curriculum work. It is very possible, for example, that the interest expressed in creating a curriculum for a subject resulted from problems encountered in translating into instruction the very broad guidelines of recent curricula prepared at the provincial level. Another example is the realization of teachers involved in Project Canada West that they needed to win support from other people for their projects (Miller & Dhand, 1973), a kind of curriculum work which school personnel initially find unattractive.

Third, the failure to integrate curriculum decision-making into the professional lives of school personnel suggests a closer look at the possibilities offered by relegating curriculum decision-making to the school level. This procedure, sometimes called school-based management, combines responsibility for curriculum and instructional decision-making, staffing, and inservice training with control of the school budget (Henriquez, 1978; South, 1975). Although there are few formal studies on the effects of school-based management, it appears to offer an opportunity for school staffs to perceive curriculum decision-making as an integral part of their work.

In summary, the evidence presented in this article points to a major obstacle to the decentralization of curriculum decision-making — limited participation by school personnel. Fortunately, the data can be used, not to disparage the merits of decentralization, but to build awareness of a potential problem and to prepare adequately for its solution.

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The Disturbing Child: He or She?

The ratings by classroom teachers of behaviours which are more prevalent in boys than in girls were compared with regard to their relative effect on teachers' attitudes. The results of three random replications indicated that those behaviours more prevalent in boys were rated as significantly more disturbing to teachers. These findings are discussed with regard to their implications within an ecological frame of reference. (Ms. Schlosser is a doctoral student in the Department of Special Education at the University of Florida; Dr. Algozzine is Assistant Professor in the same department.)

Differences in the behaviours of boys and girls have been the subject of much research (Brophy & Good, 1974; Maccoby, 1966; Meyer & Thompson, 1956). Interest in sex differences may have been promoted by bits of folk wisdom such as the following:

> What are little boys made of?
> Frogs and snails
> And puppy-dogs' tails,
> That's what little boys are made of.
> What are little girls made of?
> What are little girls made of?
> Sugar and spice
> And all that's nice,
> That's what little girls are made of.
> (Baring-Gould & Baring-Gould, 1962, p. 176)

While this characterization has an interesting appeal, no research evidence to support its contentions could be found. The prevalence of other behaviour problems in school-aged children has been studied extensively.

In an investigation of 967 kindergarten through third grade children from Minneapolis-St. Paul schools, Rubin and Balow (1971) found that educationally defined behaviour problems (i.e., inability to meet school demands) were present in 41% of the children participating in their study. Their results suggested that teachers accept a relatively narrow range of

behaviours and that deviation beyond that range is seen as cause for outside intervention. In all areas in which results were reported differentially by sex, boys consistently outnumbered girls; that is, they were rated as having repeated more grades, as having more attitude and behaviour problems, and as having received more special services.

In a comparative study of behaviour patterns of learning disabled, emotionally disturbed, and average children, McCarthy and Paraskevopoulos (1969) reported that boys outnumbered girls 9:1 in the learning disabled sample and 8:1 in the emotionally disturbed sample. These results are consistent with those reported by Reinert (1976) who suggested that boys identified as emotionally disturbed by school personnel outnumber their female counterparts six or seven to one and are eight to nine times as likely to be in a special class.

Behaviour problems associated with subpopulations identified as disturbed have been shown to be more prevalent in boys than in girls. Werry and Quay (1971) studied the prevalence of behaviour symptoms commonly associated with emotional disturbance in a sample of 926 boys and 827 girls aged five to eight. Their results indicated that while symptoms of psychopathology were quite prevalent overall in the five- to eight-year-old population, boys tended to exhibit more acting out or disruptive behaviours than girls. The total number of symptoms per child was significantly ($p < .01$) higher for boys ($\bar{X} = 11.4$) than for girls ($\bar{X} = 7.6$). Werry and Quay concluded that there was little doubt that not only did boys have more psychopathological symptoms but the "connotative sense of most of the symptoms commoner in boys represents 'badness'" (p. 142). It was further concluded from this study that boys appear to have a higher rate of disorder and are more "at risk" in our society than girls.

LaPouse and Monk (1964), in a study of 482 school children aged six to twelve who attended schools in Buffalo, New York, reported that generally, extreme scores on behavioural deviations were higher for boys. Statistical significance ($p < .05$) was also reported for boy-girl differences in bedwetting, masturbation, overactivity, temper loss and teacher complaints. Similar results were reported by Schultz, Salvia and Feinn (1974), who assessed prevalence of behavioural symptoms in rural elementary school children in east central Illinois. Using the *Behavior Problem Checklist* (Quay & Peterson, 1975), the authors report that of the 55 problem behaviours on the checklist, 36 symptoms were significantly more prevalent in boys. The overall results appeared to indicate that boys are more conduct disorder prone and demonstrate more inadequate or immature behaviour than girls, who appeared to exhibit more neurotic behaviours. Schultz et al. concluded that their study confirmed the results of Werry and Quay (1971) (i.e., that boys are more "at risk" than girls).

Adams and LaVoie (1974) studied the effect of student's sex, conduct, and facial attractiveness on teacher expectancy. Teachers who participated in the study were asked to complete an evaluation form on a Student Progress Report to which a colour photograph was attached and about which fictitious information was given. Boys were rated lower than girls on attitudes toward school, work habits and personal attitudes. The authors concluded that boys are more difficult to control and are more resistant to

the school regime; they further suggested that "this resistance may be a function of the feminizing influence in the classroom during a time when the boy is actively striving to sex type to the appropriate masculine role" (p. 82).

Sex differences in the distribution of teacher approval and disapproval among sixth-grade children were investigated by Meyer and Thompson (1956). Teacher-pupil interaction within three classrooms was recorded for a total of thirty hours per classroom over an entire school year. Results supported the hypothesis that boys receive a larger number of dominative or disapproval evaluations from their teachers. These differences were interpreted as counter-aggression to the greater expression of aggression by boys.

Harari and McDavid (1973) studied the effects of name stereotypes and teacher expectations, using 80 experienced elementary teachers and 80 female freshmen and sophomores in college as subjects. The effects of name stereotypes were shown to be clearer for boys and this stereotype bias was greater for experienced teachers than for inexperienced college sophomores. Conclusions were drawn concerning the possibility that teachers accumulate these stereotypical expectations and biases over time with their training and experience as teachers.

Investigations have recently demonstrated that the same behaviours which comprise the Behavior Problem Checklist (Quay & Peterson, 1975) represent behaviours which are "disturbing" to teachers in working with children. Algozzine (1977) has derived four dimensions of "disturbingness" from the Quay and Peterson checklist: Factor I, interpreted as a general social immaturity dimension, is perceived as troublesome both for the rater and the child, and is viewed as a precursor of more serious disturbances; Factor II, which is the "social defiance" dimension, is seen as disturbing because it represents serious breaches of the expected social order; Factor III, or "motorically disturbing" traits, is viewed as organically determined and not susceptible to self-control; and Factor IV can be identified as "socialized delinquent" behaviours which are bothersome and often associated with legal transgressions. Results of the investigation indicated that behaviours represented in Factor II (social defiance) were more disturbing than those in Factors I, III and IV. Herr, Algozzine and Eaves (1976) have shown that the disturbing nature of these behaviours can be reduced by intensive exposure to the behaviours during a summer camp experience.

The purpose of the following investigation was to determine if those behaviours which are more prevalent in boys are seen as more disturbing to teachers than are those behaviours which are more prevalent in girls. It was hypothesized that there would be no differences in teachers' ratings of the relative "disturbingness" of three sets of behaviours.

Procedure

Subjects

Three groups of teachers were randomly selected from the normative sample utilized in the development of the Disturbing Behavior Checklist (Algozzine, 1977). All of the participants were experienced regular classroom

teachers from a large metropolitan school district. Each group of thirty teachers represented a random replication sample for this investigation. All participants had responded to the 55 items of the Disturbing Behavior Checklist (Algozzine, 1978) indicating how disturbing the behaviours were in working with children. The scaled values for this investigation ranged from 1 (not very disturbing) to 5 (very disturbing) and were used to determine the relative disturbingness of selected behaviours.

Method

An analysis of the results of the major prevalence studies which utilized the Behavior Problem Checklist (Schultz, Salvia & Feinn, 1974; Werry & Quay, 1971) indicated that thirty-two behaviours were more prevalent ($p < .01$) in boys than girls; three behaviours were more prevalent in girls ($p < .01$); and fourteen behaviours were neither more prevalent in boys nor girls. The behaviours more prevalent in boys tended to be the more acting-out and aggressive as well as immature ones (i.e., destructiveness, disobedience). The girl-prevalent behaviours tended to be the more neurotic and withdrawn in character (i.e., behaves like a little adult, shyness, bashfulness). Behaviours prevalent neither in boys nor girls showed a wide range of reactions such as lack of emotional reactivity, self-consciousness, jealousy over attention paid to other children, and truancy from school.

Means of "disturbingness" were calculated because of the large differences in the number of behaviours in each of the three categories. These means were obtained by summing the teachers' responses to the 32 boy-prevalent behaviours and then dividing that total by the number of boy-prevalent items (i.e., thirty-two). The same procedure was followed to obtain means for each teacher's ratings of the girl-prevalent and neutral-prevalent (neither boy- nor girl-prevalent) behaviours. Three means were calculated for each teacher: one for the "disturbingness" of boy-prevalent items, one for the "disturbingness" of girl-prevalent items, and one for the "disturbingness" of the neutral items.

Three separate (i.e., one for each replication) within subjects analyses of variance were performed to assess the relative difference between the obtained means. The level of rejection was set at .01 and further restriction for significance was imposed in that any obtained difference between the means of less than 0.5 units was to be considered trivial. This additional criterion of one-half the unit difference between scale points was seen as necessary and appropriate due to the investigative nature of this study.

Results

The means and standard deviations for each replication sample's responses to the disturbingness of the prevalent behaviours are presented in Table 1. The analysis of variance summary tables are presented in Table 2. In each of the analyses, significant main effects ($p < .01$) were indicated. Since the assumptions regarding homogeneous variance-covariance matrices were not retained, all follow-up analyses to determine significant mean differences were carried out using the individual variances and covariances for each replication sample. In each case, the behaviours more prevalent in boys were viewed as significantly ($p < .01$) more disturbing than those more prevalent in girls; obtained differences between the means

TABLE 1
MEANS AND STANDARD DEVIATIONS FOR DISTURBINGNESS OF BEHAVIOURS

Behaviours more prevalent in boys	Behaviours more prevalent in girls	Behaviours neither more prevalent in boys nor girls
Sample One		
$\bar{X}$ = 2.9	$\bar{X}$ = 2.3	$\bar{X}$ = 2.6
s = 0.6	s = 0.8	s = 0.6
Sample Two		
$\bar{X}$ = 3.0	$\bar{X}$ = 2.5	$\bar{X}$ = 2.7
s = 0.6	s = 0.7	s = 0.7
Sample Three		
$\bar{X}$ = 3.0	$\bar{X}$ = 2.4	$\bar{X}$ = 2.7
s = 0.5	s = 0.7	s = 0.6

Note. Score range was: 1-not very disturbing to 5-very disturbing.

TABLE 2
ANALYSIS OF VARIANCE SUMMARY TABLES FOR THE DISTURBINGNESS OF PREVALENT BEHAVIOURS

Source	MS	df	*F*
Sample One			
Between subjects			
Error	0.996	29	
Within subjects			
Prevalence	2.397	2	11.306*
Error	0.212	58	
Sample Two			
Between subjects			
Error	0.821	29	
Within subjects			
Prevalence	1.432	2	7.232*
Error	0.198	58	
Sample Three			
Between subjects			
Error	0.760	29	
Within subjects			
Prevalence	2.306	2	11.646*
Error	0.198	58	

* Significant at .01 level.

were greater than the 0.5 unit difference criterion in each case. The neutral items were not seen as more or less disturbing than the girl- or boy-prevalent items.

Discussion

Significant differences were found between the "disturbingness" of behaviours which were more prevalent in boys than those more prevalent in girls. These results suggest that those behaviours which tend to be more characteristic of boys (Schultz, Salvia & Feinn, 1974; Werry & Quay, 1971) are viewed as more bothersome to teachers than are the behaviours characteristic of girls. If boys exhibit more of the behaviours which are bothersome to teachers (Schultz et al., 1974), then their behaviour is more likely to be viewed as more disturbing and of more concern than that of girls.

Ecological theorists have suggested that emotional disturbance may result from an interaction between the behaviours of a child and the effect of the behaviours on individuals in the child's ecosystem (Rhodes, 1970; Swap, 1974). Within such a model, behaviour is viewed as "disturbing" rather than "disturbed"; equal emphasis is thus placed on both the child and individuals with whom the child interacts. The implications for intervention from an ecological perspective stress the necessity of reducing the frequency of the child's deviant behaviour *as well as* altering other individuals' attitudes toward that behaviour (Algozzine, 1977). Such a model suggests that matching of teachers with students may be beneficial and productive. If children who exhibit certain bothersome behaviours are matched with teachers who are tolerant of those behaviours, perhaps "disturbance" in an ecological sense could be avoided.

The strategy of training teachers to be aware of their differential behaviour toward students who exhibit interpersonal differences has shown some promise in changing teacher behaviour effectively (Good & Brophy, 1974). An extension of this concept might include teachers indicating to boys that their behaviour is bothersome and then offering constructive, acceptable less disturbing alternatives to them. This type of mutual "ecological adaptation learning" seems warranted and positively supported by the results of this investigation.

The present study implies that boys exhibit more disturbing behaviours than girls and that teachers should acknowledge and deal with this difference so that it does not become a source of detrimental ecological imbalance within the school environments. Through such a constructive approach to behaviour change and acceptance, perhaps it will be possible to optimize the school experiences of more children.

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Pupil Control Ideology: Comparative Perspectives — United States and Canada

The conceptual framework on which this study is based emphasizes the fact that the public school is an organization which does not have control over the selection of clients. Therefore, teachers are dealing directly with non-selected clients and can see themselves as directly responsible for control. The Pupil Control Ideology Scale (PCI) is based on this framework. This scale was used to assess the PCI level of 202 teachers in central and suburban English-language public schools around Montreal in a study conducted during the winter of 1977. The study explored the relationship between PCI and the sex of the teacher, level of teaching (preschool, elementary, secondary), as well as level of school bureaucracy based on the Moeller scale.

In line with the results of similar studies from the United States, the results of this study indicated that male teachers were more custodial than female teachers, secondary school teachers were more custodial than elementary school and preschool teachers, and that PCI scores increased with increasing bureaucratization levels. However, on the whole, lower means of PCI were obtained for the group of teachers in this study as compared to the results available from the United States. (Ms. Hamalian is Chairman of the Department of Education at Concordia University.)

The Problem

Social control is a critical element of group life for establishing and maintaining social order. In society certain institutions assume the responsibility of developing social control in people through a special process of socialization. The family, the school, the church, prisons, and mental hospitals strive to mold the personality of their members to fit the social order acceptable at a particular time in a given society. However, it is true that each of these social institutions may develop control differently and may use different means and mechanisms to achieve this aim.

Public schools as social organizations share certain characteristics with some other institutions of society. Like prisons and mental institutions,

schools do not have much of a choice in the selection of their clientele. On the other hand, the clientele does not have much of a choice either, in the selection of a particular school (Carlson, 1964). Therefore, these organizations and their personnel are confronted with clients who have little or no desire to engage the services offered by these organizations, thus creating the need to control the clientele on the part of the staff. It should be noted, however, that at least two important differences exist in the case of the schools as compared to other organizations. First, prisons and mental institutions are coercive organizations, while schools are normative organizations (Etzioni, 1961). Second, prisons and mental hospitals are "total institutions" while the schools are not (Goffman, 1961). Nevertheless, the similarity of not having a choice over the selection process of the client-organization relationship should have important ramifications in the case of the schools as in the other socialization institutions.

In addition to the fact that schools are organizations which do not have a choice in the selection of their clientele, some of the means and mechanisms involved in the proper functioning of schools are significant in this respect, as well. For example, since the primary task of the teacher is to define and evaluate student levels of achievement, control of most of student behaviour is inevitable and expected in one form or another (Clarke & Hunka, 1977).

Gilbert and Levinson (1957) developed a classification of client control ideology which has been adopted for use in the study of pupil control ideology in public schools in the United States (Willower, Eidell & Hoy, 1967). At one extreme of their conceptual continuum is the "Custodial" orientation which characterizes rigidly traditional schools where the stress is on the maintenance of order, distrust of students and a punitive, moralizing orientation towards pupils. At the other extreme of the conceptual continuum is the "Humanistic" orientation as suggested by Fromm (1948), stressing the importance of the individuality of each pupil, an accepting, trustful view of students, and confidence in their ability to be self-disciplining and responsible.

Furthermore, different schools differ in their policies and orientations concerning control of students. According to Gouldner (1954), the implementation of control through strict rules of reward and punishment may indicate certain tensions within a bureaucratic structure. In this relation, studies which have focused upon schools as social systems have described conflict and problems related to different student subcultures (Coleman, 1961; Willower, Eidell & Hoy, 1967; Gordon, 1957). The interest in these problems has been translated into research and the related literature, by the development of models of custodial and humanistic pupil control ideologies as well as an instrument to measure these different orientations (Willower, Eidell & Hoy, 1967).

Organizational socialization is very important for the secondary socialization process related mainly to occupational and adult roles in an advanced industrial society. Etzioni (1961) states that "Learning of specific skills and role orientations continues with every change of status, in particular with membership in new social units, such as organizations" (p. 142).

Public school teachers go through a double process of organizational socialization: first, at the college level where they learn the ideal norms and patterns associated with the role of a teacher and then through the actual teacher subculture of the particular school where they start their teaching career (Eddy, 1969; Waller, 1967). The following quote from Waller (1967) addresses itself directly to this problem:

> The significant people for a school teacher are other teachers, and by comparison with good standing in that fraternity, the good opinion of students is a small thing and of little price. A landmark in one's assimilation to the profession is that moment when he decides that only teachers are important. (p. 389)

The literature on this topic abounds with examples illustrating an orientation toward a desirable permissive control ideology during the college years while the practice of "discipline" in the public schools is of the more authoritarian variety (Ausubel, 1961). Willower, Hoy and Eidell (1967) furnish a few examples of the kind of conflict a new teacher experiences in a school:

> Newer teachers reported that a major problem was to convince the older, more experienced teachers, that their younger colleagues were not soft on discipline. The older teachers, dominant in the informal structure of the school, seldom hesitated to communicate their views to the younger, newer teachers whom they often thought of as being lax about maintaining sufficient social distance with regard to pupils. Teachers viewed as weak on control had marginal status among their colleagues and others. Situations of high visibility such as the assembly or school library furnished special testing grounds where teachers made valiant efforts to "look good." Thus, in assemblies, some of the most striking performances emanated from the audience. (p. 229)

Different organizational variables of public schools in their relation to pupil control ideology have been analyzed using the Pupil Control Ideology (PCI) instrument devised by Willower, Eidell and Hoy (1967). Using data from the public school system of the United States, different research studies have supported that teachers are higher on PCI than principals and counsellors (Willower, Eidell & Hoy, 1967); that elementary school teachers are less custodial than secondary teachers; that teachers in schools with a clientele from a higher SES category are less custodial than teachers in schools with a clientele from lower SES categories (Barfield & Burlingame 1974); that teacher PCI varies with the community structure in which the schools operate (Andrews, 1973); that PCI varies with the "open" and "closed" climate of schools (Waldman, 1971; Batista, 1973; Appelberry & Hoy, 1969; Drozda, 1972); that PCI is also related to self-acceptance, self-image and self-actualization levels of teachers (Brenneman, 1973; Noll, Willower & Barnette, 1977; Barfield & Burlingame, 1974).

The variable of sex has not been examined specifically. Whatever results exist in the literature in this respect are either by accident of sampling (Hoy, 1968, 1969) or as an afterthought (Budzik, 1971). In the same way, at the level of the school organizational context the level of bureaucracy of the school has not been directly probed in most of the studies available on this topic. Furthermore, the data pool available is drawn mainly from the public school system in the United States (northeastern and southwestern United States and most particularly from Pennsylvania, New York, New Jersey,

and Oklahoma). Some duplication effort has been conducted in Australia (McArthur, 1973) and in Canada (Fritz, 1973; MacMillan, 1973).

The primary purpose of the project on which this paper is based was to generate some data from Quebec and to explore the relationship between PCI and the sex of the teacher, level of teaching (preschool, elementary, and secondary), as well as level of school bureaucracy.

The Instruments

A. The PCI Form

The Pupil Control Ideology Form (PCI Form) was developed by Willower, Eidell and Hoy (1967) based on literature, their experience in public schools, field notes from previous studies, and the classification of client control ideology proposed by Gilbert and Levinson (1957). The PCI Form consists of twenty statements measured on a five-point Likert-type scale ranging from "strongly agree" (5-point score) to "strongly disagree" (1-point score). The range of possible scores on the PCI Form is between 20 and 100. A high score signifies a custodial attitude toward pupil control and a low score is indicative of a humanistic attitude toward control of pupils.

According to Willower, Eidell and Hoy, split-half reliability coefficients in two samples were .95 (n = 170) and .91 (n = 55) with application of the Spearman-Brown formula. Teachers judged to be most custodial by their principals had significantly higher ($p \leqslant .01$ using t-testing procedures) PCI Form scores than a like number of teachers judged to be most humanistic. Finally, a cross validation was carried out using the same technique described above (based upon principals' judgements of teacher ideology). Using a one-tailed t-test, it was found that there was a difference between the mean scores of teachers judged to be custodial in ideology and teachers judged to be humanistic in ideology, significant at the $p \leqslant .001$ level.

B. The Moeller Scale of Bureaucratic School Systems

Whatever the basic orientation of an individual teacher toward control, this will converge with the effects of the school organization and social system. The concept of bureaucracy provides a tool for identifying the complexities of the interaction of organizational and human antecedents which have their various effects upon teachers. One of the areas explored by this project was the interrelation of pupil control ideology and the level of school bureaucratization. It was therefore necessary to find a suitable measure of bureaucratization. The measure constructed by Moeller (1964) is based on the characteristics of bureaucracy described by Blau (1956). Since most North American school systems are organized along the bureaucracy model, the distinctions drawn among schools must be within a relatively narrow range on a bureaucratization continuum.

Moeller developed a bureaucracy continuum using an eight-item forced choice instrument on which schools could be scaled from type 0 to 8. A school system to which none of the items applied was scored 0 and the school system to which all eight items applied received a score of 8. The coefficient of reproducibility was found to be .93. The method of scaling the data followed by Moeller is based on the procedures outlined by Riley, Riley and Toby (1954) for construction of an object scale, that is, data from

individuals combined to represent collective responses. Because of the limited number of objects used in scale analysis, the interrater reliability was computed by Moeller and reported to be .47. The reason for the low-interrater correlation is given by the author to be the impossibility of taking out the between rater variance which must go into the the error term. Since a subject scale of bureaucracy (for judges) indicated systematic differences between the judges, a cross-tabulation of subject and object scores was made and the correlation as estimated by the coefficient of contingency was virtually zero. Although it is indicated by Moeller that only a study conducted on a far larger sample of ratings could verify the unidimensionality which this measure is presumed to possess, for the purposes of this study we chose this measure of school bureaucratization level because it is very short and very easy to administer.

The Sample

Teachers (n = 202) in central and suburban English language public schools around Montreal comprised the random sample for this project, conducted during the winter of 1977. Student trainees in a Sociology of Education course at the university helped in distributing and collecting the questionnaires. Of the initial 250 questionnaires, 231 were returned and of these, 29 were not used because of missing information. Of the remaining 202 questionnaires, 42 (20.8%) were completed by preschool teachers, 65 (32.2%) were completed by elementary school teachers, and 95 (47%) were completed by secondary school teachers. Twelve teachers (5.9%) had only one year of teaching experience, another 57 teachers (28.2%) had two to four years of teaching experience, and the remaining teachers (65.8%) had five or more years of teaching experience.

Sixty-three (31.3%) of the teachers were males and 139 (68.8%) were females. Ninety-three (46%) were from suburban Montreal schools and 109 (54%) were teaching in central Montreal schools. Twenty-seven teachers (13.3%) described their schools as low in bureaucratic organizational level as measured on the Moeller scale, 44 teachers (21.7%) taught in relatively low bureaucratic schools, 60 teachers (30%) taught in relatively high bureaucratic schools and 70 teachers (34.6%) were from highly bureaucratic schools. One teacher (.5%) did not answer this part of the questionaire. The pupil control ideology of these teachers ranged between 30 and 70 as measured on the PCI scale developed by Willower, Eidell and Hoy (1967). More specifically, one teacher (.5%) had a score between 20 and 29; 25 teachers (12.4%) scored between 30-40; 78 teachers (38.6%) scored between 41-50; 80 teachers (39.6%) scored between 51-60; and 18 teachers (8.9%) scored between 61-70.

The ages of these teachers ranged from 20 years to 61 years of age. Thirty-five teachers (17.3%) were younger than 25, 71 teachers (35.1%) were between 26 and 30 years old; 28 teachers (13.9%) were between 31 and 35 years old; 32 teachers (15.8%) were between 36-40; 25 teachers (12.4%) were between 41-50; and 11 teachers (5.5%) were over 51 years of age. All the teachers in the sample had 13 years or more of formal schooling, 55 (27.2%) had credits towards a B.A. degree but not a completed degree, 28 (13.9%) possessed a B.A., 94 (46.5%) had earned credits beyond a B.A. degree, seven teachers (3.5%) had completed M.A. degrees, twelve (5.9%) had earned

credits beyond the M.A. degree, one had a Ph.D., and five others had different graduate diplomas. For 91 (45%) teachers the undergraduate major was in the field of education, for 63 others (31.2%) it was outside the field of education, and for the remaining 48 teachers (23.8%) it was a combined degree program with education as a minor or a major. One hundred and seventy-seven (87.6%) teachers were Canadian nationals, twenty-five (12.4%) were landed immigrants. The personal income of 51 (25.2%) teachers was less than $10,000 a year, for 101 (50%) teachers it was between $10,000 and $15,000, for 33 teachers (16.3%) this income was between $16,000 and $20,000 while 17 teachers (8.4%) had incomes over $20,000.

Fifty-eight (28.7%) teachers indicated their religious affiliation to be the Catholic Church, 68 (33.7%) were Protestants, 49 (24.3%) belonged to the Jewish faith and 10 (5%) belonged to other religious groups while 17 (8.4%) did not have any particular religious affiliations.

Asked whether they would choose teaching as a career if they had to start all over again, 81 (40.1%) answered yes, 55 teachers (27.2%) said they probably would become teachers again, 44 (21.8%) were undecided and 22 (11%) said they would most probably choose another occupation.

The Results

The purpose of the project on which this paper is based, as stated earlier, was to explore the relationship between PCI and the sex of teacher, the level of teaching, as well as level of school bureaucracy, using a sample of teachers from Quebec to generate data comparative to that already in existence on teachers in the United States.

The PCI of Male and Female Teachers

In this sample, the results (using a two-tail t-test procedure) indicate a mean score of 51.85 for the 63 males as opposed to a mean score of 48.75 for the 139 females ($p \leqslant .01$).

This result is in agreement with Budzik's (1971) results where female teachers were found to be more humanistic in PCI than their male counterparts. The data of Hoy (1969) were for all female elementary teachers, but at the secondary school level there were 16 male and 29 female teachers in the group. The mean score on the PCI Form of the female elementary school teachers after first year of teaching was 48.75. At the secondary school level a comparison of the mean PCI score of male and female teachers indicated that the respective means after the first year of teaching were 54.28 for the women and 58.56 for the men.

The PCI and Level of Teaching

The mean PCI Form score for preschool, elementary, and secondary school teachers were compared and the results indicated respective scores of 47.40, 49.36, and 51.00 (A $p \leqslant .05$ was obtained only between preschool and secondary groups).

Once again the results are in agreement with the data existing in the literature as described in the previous paragraph (Hoy's results) and as supported by further data from Willower, Eidell and Hoy studies (1967) where the mean score for elementary teachers was found to be 55.3 as

TABLE 1
SUMMARY OF THE MEAN PCI FORM SCORE FOR TEACHERS IN SAMPLE (N = 202) BY SEX, LEVEL OF TEACHING, AND LEVEL OF SCHOOL BUREAUCRATIZATION

	Male		Female		Total	
	Number	Mean	Number	Mean	Number	Mean
Sex	63	51.85	139	48.75	202	49.22
		$p<.01$				
Preschool	(only one male)		41	47.44	42	47.44
Elementary	14	54.00	51	48.07	65	49.35
		$p<.01$				
Secondary	48	51.37	47	50.61	95	51.00
		n.s.				
Bureaucracy 1-2[a]	8	48.37	19	46.31	27	46.92
Bureaucracy 3-4	13	48.84	31	49.41	44	49.25
Bureaucracy 5-6	18	52.44	42	49.50	60	50.38
Bureaucracy 7-8	24	54.20	46	48.60	70	50.52

Preschool vs Elementary: n.s.; Preschool vs Secondary: $p<.05$; Bureaucracy 1-2 vs 3-4: n.s.; Bureaucracy 1-2 vs 5-6: n.s.; Bureaucracy 1-2 vs 7-8: $p<.05$; Bureaucracy 3-4 vs 5-6: n.s.; Bureaucracy 3-4 vs 7-8: n.s.; Bureaucracy 5-6 vs 7-8: n.s.

Note. n.s. = not significant at the $p < .05$ level.

[a] One teacher did not answer the questions on the level of school bureaucracy. Therefore, this part of the analysis has an N of 201 teachers.

opposed to 62.3 for secondary teachers ($p \leq .001$). Further evidence in the same direction is provided by Barfield and Burlingame (1974) who show a mean PCI Form score of 49.40 for elementary teachers as compared to 52.85 for senior high teachers and 55.65 for junior high teachers ($p \leq .01$). The preschool teacher group in this study was all female with one exception, and this may be a confounding factor. However, the study proceeded to examine male/female differences at the elementary and secondary level. At the elementary level, the mean score for the women was 48.07 and 54.00 for the men ($p \leq .01$). At the secondary school level, the mean for the women was 50.61 and 51.37 for the men. The male/female difference exists at both levels, although it is less significant at the secondary level.

PCI and Level of School Bureaucracy

The group mean on the PCI Form for teachers who were teaching in schools with very low bureaucracy scores as measured on the Moeller scale (1-2) is 46.02, for the next level (3-4) a mean of 49.25 was obtained, for the higher level (5-6) the mean was found to be 50.38, and for the highest level (7-8) the mean is 50.52. The PCI increases with increasing level of school

bureaucratization. Significance at $p \leqslant .05$ level was obtained only between the lowest (1-2) and the highest (7-8) levels of bureaucratization.

Is there a difference in the PCI of male and female teachers at different levels of school bureaucratization? A comparison of the mean PCI score for men teaching at respective bureaucratization levels of (1-2), (3-4), (5-6) and (7-8) gave the following results: 48.37, 48.84, 52.44 and 54.20, indicating a steady increase in PCI from the lowest to the highest level of school bureaucratization. Significance of $p \leqslant .05$ was obtained only in a comparison of groups (3-4) and (7-8).

As for females, the respective mean PCI scores at each level of bureaucratization were 46.31, 49.41, 49.50 and 48.60. Again, there was a trend of increasing PCI scores with increasing levels of bureaucratization (except at 7-8 level). The greatest rise in PCI for male teachers occurred between the three higher levels of bureaucratization while in the case of females, the rise occurs between the first two levels of bureaucratization.

Discussion

The conceptual framework on which this research is based emphasizes the fact that the public school is an organization which does not have control over the selection of clients and because teachers are dealing directly with these non-selected clients, they are or see themselves as directly responsible for their control. Furthermore, since pupils at the elementary school level are seen as posing a lesser threat than pupils at the secondary level, there is the expectation that secondary school teachers will be more custodial in their orientation than elementary school teachers. Previous research has supported this expectation (Willower, Eidell & Hoy, 1967; Barfield & Burlingame, 1976). Our data also support this expectation for the total sample of teachers. The PCI Form mean score for preschool teachers (mostly females) is lower than the PCI Form mean score for elementary school teachers which is itself lower than the PCI Form mean score for the secondary school teachers. However, the difference is only significant between the preschool and secondary school groups. Even here the confounding factor may be the sex of teachers but when broken down along the sex factor, the mean score for the secondary school females is comparable to the mean score of all secondary teachers. Therefore, this expectation is supported.

Although there is no significant difference between the PCI of secondary male and female teachers, there is a significant difference between the two groups at the elementary school level. This may be due to the fact that male teachers have been traditionally associated more with secondary pupils and that they do not feel at ease at the elementary school level and therefore are more inclined to emphasize the custodial aspects of their role.

The second point emphasized in this study was the effect of the level of school bureaucratization on the pupil control ideology of the public school teachers. In recent years, many school reforms have claimed that school bureaucracy is the main factor associated with apathy, custodial orientation towards clients, and rigid ritualistic behaviour. School bureauracy, it is felt, substitutes rigid conformity to rules in the place of sound professional judgement and orientation. However, in spite of these

possibilities, several studies have described different conclusions. Bonjean and Grimes (1970) as well as Kohn (1971) have concluded that workers in bureaucratic organizations are more enthusiastic, more productive, and exhibit more self-direction than workers in non-bureaucratic organizations where they are faced with confusion because of rule diffuseness. Anderson (1968) applied a similar approach to a junior school setting and found that teachers were least likely to perceive threats to their professional integrity where administration established specific rules for teacher behaviour. Furthermore, a study by Moeller and Charters (1966) indicated that teachers in bureaucratic schools had a significantly higher sense of power in relation to decision making than those in less bureaucratic systems.

As far as results of this study are concerned, there is a steady rise in the PCI Form mean score for the sample with increasing level of bureaucratization (46.93; 49.25; 50.38 and 50.53). However, the inclusion of the preschool teachers and the fact that they are all females confounds this finding. It is known, on the other hand, that the mean score for bureaucratization of the preschools is 5 as opposed to elementary schools where females taught (5.6), elementary schools where males taught (7), secondary schools where females taught (4.9), and secondary schools where males taught (4.4). Therefore, except for the case of elementary male teachers, the distribution of the rest of the sample in schools with different levels of bureaucratization was comparable. Considering males and females separately, there is a steady increase in the mean scores with increasing levels of bureaucratization. It seems that only the extreme levels of bureaucratization make a difference, although there are no significant results to support this fact. Therefore, different levels of bureaucratization do not seem to affect the PCI of the teachers in this sample to any significant extent. Teaching level seems to be more important, and the case of males teaching at the elementary school level is the most problematic.

The most interesting finding of this project is the fact that, irrespective of all other factors involved, the teachers had a lower PCI Form mean score than those in the American samples available in the literature. One important factor may have been the fact of continuing education affecting the teachers in this sample, most of whom were actually involved in some sort of college or university programme to upgrade their academic qualifications. This was a result of the "declassification" procedures which were being implemented by the education authorities in Quebec in an attempt to encourage teachers to take retraining and refresher courses at the university level.

In addition to the fact that the results of this study are very tentative ones because of the size of the sample, the instruments used, lack of control variables, and other research procedures, another important factor to remember is that PCI indicates only an orientation on the part of the teacher and not actual behaviour. Research relating Pupil Control Ideology to Pupil Control Behaviour is in process (Noll et al., 1977). The degree of bureaucratization of the school may be more important when considering actual behaviour patterns because of the "pluralistic ignorance" effect demonstrated by Biddle and his associates (1969):

> It was discovered that, for such teacher behavior frameworks as "discipline," "watching for cheaters," "supervision," and the like, respondents attributed to

> "People in General" and to "School Officials" much more conservative norms than were actually held by those positions. This distorted view . . . was held by teachers, parents, and pupils alike. Only school officials were able to assess the truly liberal norms held by other school officials and they shared in the general ignorance of public opinion on these issues. (p. 168)

The control function of schools has been a central interest in the field of comparative and international education, especially in its meaning at the societal control level (Writings of the founding fathers and many contemporary researchers, for example Eckstein, 1966). Gradually, this interest is focusing at the classroom level where the general orientations are actually being implemented and transmitted. Interesting studies are being reported but these are isolated case studies. Rust (1973) describes differential control patterns exercised by preschool teachers in Los Angeles, London, and Frankfurt. Direct observation is a most informative method but has many shortcomings such as observer bias, long and expensive training for the preparation of competent observers, language barriers, interference in the classroom activities and its implications, just to cite a few examples. The instrument to measure the Pupil Control Ideology and the related Pupil Control Behaviour are reported to be relatively reliable by several researchers working with different school systems in the United States. It is therefore recommended that similar research be encouraged in Canada as well as in countries having comparable school systems.

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The Effects of Role Exchange Questioning on Empathetic Perceptiveness

Empathetic perceptiveness may be a necessary condition for changing a disposition of intolerance toward cultural diversity to a disposition of tolerance. The purpose of the study was to test the effects of subjects reading passages from the novel, Under the Ribs of Death *by John Marlyn, and then being asked role exchange questions. Subjects were pretested with a Dogmatism scale to determine whether there would be interaction between dogmatism and treatment, and posttested with a measure of empathy. No significant treatment or interaction effects were found. There are at least three possible reasons for lack of treatment effect. First, reading novels and being asked role exchange questions do not enhance empathetic perceptiveness. Second, the scale used to measure empathy was not sensitive enough to discern change. Third, societal factors influencing subjects' attitudes may be so pervasive that subjects are not greatly influenced by what happens to them in school. (Dr. Kehoe is Associate Professor of Social Studies Curriculum and Dr. Ungerleider is Associate Professor of Sociology of Education in the Faculty of Education at the University of British Columbia.)*

Because of the time at which it occurs in a person's life and the amount of time it occupies, public schooling should have a significant impact upon a person's tolerance of cultural diversity. Regrettably, too little is known about the school's impact upon a person's tolerance of cultural diversity and the conditions necessary for changing a disposition of intolerance to one of tolerance.

The development of student empathetic perceptiveness might well be a necessary condition for changing a disposition of intolerance toward cultural diversity to one of significantly less intolerance. If students are able to identify empathetically with ethnic diversity, it is possible that prejudicial attitudes and discriminatory behaviour toward ethnic groups could be changed.

Background

Guira (1967) examined the definition of empathy and found that each definition includes the notion of a shared relationship. The sharing and gaining of understanding through some kind of experience seemed to be an essential aspect of empathy. More recently, Hoffman (1975) defined empathy as the involuntary and, at times, forceful experiencing of another's emotional state. It is elicited either by expressive cues which frequently reflect the other's feelings, or by other kinds of cues which convey the affective impact of external events on the other person.

It has also been argued that empathetic perceptiveness is a necessary component of a moral person. Selman (1975) has stated that empathy is an important component of role-taking ability. Role-taking ability has been shown to be a necessary condition for moving to higher stages of moral development (Kohlberg, 1971). Wilson (1972) has argued that empathy is one of eight components necessary for morality.

Research literature concerning the relationship between dogmatism and intolerance does little to clarify the relationship between dogmatism and empathetic perceptiveness. On the one hand, Rokeach (1960) implies that highly dogmatic personalities would most likely identify with persons in positions of authority who are able to wield power. On the other hand, Fellenbaum and Jackman (1961) have shown that highly dogmatic personalities score high on measures of anxiety. Their work implies that highly dogmatic personalities are able to empathize with the anxiety felt by persons who are subjected to overt discrimination.

Research Design

Purpose

The purpose of the research was to test the effects of role exchange questioning on the empathetic perceptiveness of students. The study was designed to discover whether the impact of the treatment upon the empathetic perceptiveness of students was affected by the level of students' dogmatism or by the teacher to whom the students were exposed. The design of the study is summarized in Figure 1.

Timetable Block		Pretest	Treatment		Posttest
			Experimental	Control	
A	R	O_1	T_1	T_2	O_2
B	R	O_3	T_2	T_1	O_4
D	R	O_5	T_1	T_2	O_6
E	R	O_7	T_2	T_1	O_8
F	R	O_9	T_1	T_2	O_{10}
G	R	O_{11}	T_2	T_1	O_{12}

R = Randomization; T_1 = Teacher #1; T_2 = Teacher #2
$O_{1,3,5,7,9,11}$ = Dogmatism Scale
$O_{2,4,6,8,10,12}$ = Empathy Scale

Figure 1. Study design.

Sample

One hundred and ninety-nine secondary school students from grades eight, nine, ten, and eleven social studies classes participated in the study. These students were randomly assigned to experimental and control groups within six timetable blocks and were pretested with the Dogmatism Scale (Rokeach, 1960).

Method

Two teachers alternated teaching experimental and control classes, although they considered both experimental and control classes to be "experimental classes." Each teacher believed that the purpose of the study was to develop the students' capacity for understanding another person's feelings. It was explained that the successful development of this capacity should help in the study of history by enriching students' understanding of the feelings and motives of the persons about whom they study. The duration of the treatment was two class hours.

Each experimental class read excerpts from Marlyn's (1957) *Under the Ribs of Death* and then were asked role exchange questions about the feelings they would have if they were in the position of the main character in the novel. *Under the Ribs of Death* is the story of the son of an Hungarian immigrant couple growing up in North Winnipeg in Manitoba. The main character of the book, as a boy and a man, is subjected to humiliation and discrimination because of his ethnic background. His name is mispronounced and he is teased because of it. Teachers, librarians, and nurses are amused when they cannot pronounce his name. He is refused a position with an insurance company because of his ethnic background.

The boy wishes that his family would reject the values of their culture and adopt the values of the English culture. Throughout the novel the boy attempts to transcend his background in an attempt to achieve "success" as he believes it is defined by the English culture. Although the protagonist changes his name from Sandor Hunyadi to Alex Hunter and attempts to manifest attitudes and behaviour associated with the dominant English culture, his ethnic origins are repeatedly discovered and ridiculed and he is subjected to persistent discrimination.

The control class read excerpts from W. O. Mitchell's (1947) *Who Has Seen the Wind* and were then asked irrelevant role exchange questions. For the most part the questions were related to the main character's relationship with God.

Upon completion of the treatment all subjects were tested with an eleven-item Empathy Scale. The Hoyt reliability estimate reached .60. A sample item from that scale follows, with the correct response indicated.

> A French Canadian born in Quebec goes to British Columbia for the first time and listens to an open line program discussing the French language television outlet to be established in Vancouver. Most of the discussion was strongly opposed to the French station. How do you think he would be likely to react to this?
>
> ——(a) He probably thinks they are right at present, since it is causing trouble.
>
> ——(b) He may notice it at first, but after a while he probably gets used to it and it doesn't make much difference to him.

—X—(c) He very likely feels hurt by it and perhaps very angry.

——(d) It is hard to know exactly how he would react to such a situation, though with more information one might be able to tell.

Analysis and Results

The data were computer analyzed in a three by three factorial design using an analysis of variance technique. An analysis of variance of the posttest scores of the experimental and control groups is reported in Table 1.

TABLE 1
ANALYSIS OF VARIANCE: EMPATHY SCALE

Source	df	M.S.	*F*	*p*
Treatment	1;187	6.02	1.04	<.30
Dogmatism	2;187	18.99	3.30	<.03*
Teacher	1;187	.45	.07	<.77
Treatment × Dogmatism	2;187	7.12	1.23	<.29
Treatment × Teacher	1;187	.24	.04	<.83
Dogmatism × Teacher	2;187	5.50	.95	<.38
Treatment × Dogmatism × Teacher	2;187	.83	.14	<.86

* High dogmatism significantly lower in empathy.

Discussion

The lack of treatment effect was surprising because the teachers reported behaviours and comments on the part of the Marlyn treatment classes which suggested treatment effect. Subjects reported they enjoyed the book and asked for permission to take it home and read it. More of the Marlyn books than of the Mitchell books were taken and not returned. The teachers perceived a shift in class comments from descriptions of how Hunyadi was feeling to descriptions of how they would feel if such things were happening to them. Unfortunately no systematic record was kept of those events so that statistical comparisons could be made.

The study was replicated (Kehoe, 1977) with grade twelve subjects and the empathy scale was expanded to twenty-five items. Again no treatment effects were found. A similar study was conducted by Kehoe, Echols and Barnes (1977) using the novel *Thirty Acres* by Ringuet. It is the story of a French Canadian farmer who loses his land when he is old. A modification of the expanded empathy scale was used and no treatment effects were found. No interaction was found between dogmatism and the treatment. However highly dogmatic individuals tended to exhibit less empathetic perceptiveness than did low dogmatic individuals.

There are at least three possible reasons for lack of treatment effect. First, reading novels and being asked role exchange questions does not enhance empathetic perceptiveness of students. Second, the scale used to measure empathy was not sensitive enough to discern change. Third, societal factors influencing subjects' attitudes may be so pervasive that subjects are not greatly influenced by what happens to them in school.

The notion that societal influences upon students may be so pervasive that students' attitudes are not substantially affected by school curricula is both frightening and intriguing. It suggests that curriculum research of this type might profitably investigate the ways in which students perceive and respond to the curricula presented in school. Through detailed investigation it may be possible to discover the inferences students derive from the formal curricula and the ways in which they integrate or fail to integrate these inferences with those they draw from their experiences outside of the school.

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BOOK REVIEWS

REGISTER OF RESEARCH INTO HIGHER EDUCATION IN WESTERN EUROPE 1974-7. Guildford, England: Society for Research into Higher Education, 1977, 302 pp.

This volume is the second such register published by the Society which has its headquarters at the University of Surrey in the United Kingdom. The register, made possible by financial assistance from the Council of Europe, lists 380 projects which were in progress in Western Europe, excluding the U.K., between 1974 and 1977. All the countries of continental Western Europe are represented but the Netherlands leads the way, with West Germany close behind and France, Sweden, and Finland also very active in this field of research.

The register is a model of organization. Projects are classified in ten different sections, as follows: A, General; B, Economics and Manpower; C, Administration; D, Specific Subjects including curriculum; E, Teaching Methods and Educational Technology; F, Staff; G, Students — General; H, Students — Selection and Performance; I, Students — Choice of Subjects and Careers; J, Further and Adult Education. Of these, the most popular areas with researchers, according to the register, were E and H, with A, D, and J also well supported. On the other hand, section F attracted only nine projects in the period under review.

Every project is numbered and all necessary information is given to enable the interested reader to get in touch with the authors of a particular project. Each entry contains a very brief abstract of the research — just a few lines — to indicate its scope and methodology; the source of financing is noted and also the probable date of completion. If the study has been completed, details of any consequent publications are given. The register concludes with an index of researchers and of sponsoring institutions and organizations.

The register, of course, gives no indication of the conclusions reached in any study or of the relative merits of researches in the same field. It makes no judgements; it is purely a bibliographical handbook and, as such, it is very useful to researchers with a knowledge of the relevant languages. Short summaries of some studies, however, are available in English.

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TEACHING CONCEPTS: AN INSTRUCTIONAL DESIGN GUIDE. *By M. David Merrill and Robert D. Tennyson.* Englewood Cliffs, N.J.: Educational Technology Publications, 1977, 214 pages, $14.95.

Content

This textbook is designed to provide an integrated, step-by-step guide to the design and development of instructional sequences and materials using one set of "empirically validated procedures" (p. ix) for teaching a single concept or a set of coordinated concepts. In accord with this intent, the authors do not present a description of alternative instructional strategies, a review of the research literature, or a lengthy discussion of the rationale for selecting particular techniques.

A brief introduction to the instructional design model is presented in the Preface where the reader is also introduced to basic terminology. A detailed explanation of the model is discussed in the subsequent eleven chapters of the book. The discussion includes methods for defining concepts, collecting instance pools of examples and non-examples, estimating instance difficulty, preparing diagnostic tests of classification errors, using attribute isolation (stimulus prompting), designing instructional strategies, teaching coordinated concepts, and formative and summative evaluation. The twelfth and final chapter provides a five-page, flowchart summary of the instructional design model. A brief summary of six related research studies performed by the authors and their colleagues is presented in the appendix. A detailed table of contents lists major and minor topics of discussion. A comprehensive subject index is provided. There are 202 pages of text and illustrations.

Instructional Design

The book is exemplary in its use of instructional design techniques. The authors use concise advance and post organizers as well as brief reviews of previously discussed material to link the chapters together as they evolve a logical and sequential model of instructional design. Important points, terminology, definitions, examples and special notes are variously emphasized through the judicious use of standard and italic type, upper and lower case print, bold and thin face letters, diagrams and photographs, as well as an excellent use of space. These methods are well used and complement rather than detract from the text so that the content rather than the device is salient and the reader is not given the feeling of clever contrivance. The book is very easily and pleasurably read and understood.

The discussion is replete with a variety of illustrative materials drawn from various sources including physics, geography, grammar, politics, advertising and the law. This variety of examples not only illustrates the discussion, provides variety and heightens interest, but also exemplifies the authors' techniques of teaching concepts, and facilitates generalization. Some examples are repeatedly considered and successively developed over several chapters. The progressive development of a familiar example provides continuity from chapter to chapter.

Audience

The authors state that their "empirically validated" (p. ix) techniques for teaching concepts from "the whole curriculum" (p. 199) to "*most* students" (p. 112, 117, 122 and 134) will produce "concept lessons that are better than you have ever previously taught" (p. xii). Merrill and Tennyson further state

that these methods may be used to assist "teachers, instructional developers, curriculum planners, textbook authors and others who are concerned with effective instructional strategies" (p. xi).

However, the validity of these statements must be questioned in view of the limited number and type of students and concepts studied in the research studies reported in the appendix. Five of the six studies cited were carried out on undergraduate students at the Brigham Young and Florida State Universities, while the sixth study was conducted on junior high school students. These studies examined the teaching of meter in poetry, and the identification of adverbs and chemical crystals. No elementary school children were reportedly studied. Most of the examples of techniques used are presented in a manner most suitable to a textbook instructional format. No techniques are discussed regarding the direct instructional involvement of teachers in common elementary classroom situations. Thus, it appears that the techniques might be most suitable to the design of textbooks for secondary and college level students.

Another difficulty relating to the general usefulness of the text arises from the authors' apparent attempt to design a book that would be both attractive and useful to novice programmers. In a forenote to the text the authors suggest that to some readers "the procedures outlined in the book may appear to be extremely laborious;" in the final pages of the book the authors report that the comment, "no one can possibly use such detailed procedure" (p. 199), is not unusual. Unfortunately, the authors' attempt to provide a simplified model of instruction of general appeal appears to have led to the elimination of necessary detail. There is very little discussion regarding the many complex issues relating to the selection and sequencing of examples and non-examples, the use of various instructional formats and a variety of prompting, fading, feedback, reinforcement and correction procedures.

Finally, the reader should note that, although many of the techniques designed to teach concepts have been empirically validated with particular populations of students, no evidence is provided to indicate that the use of the instructional model described in this text will teach readers to use these techniques to "produce concept lessons that are better than you have ever previously taught" (p. xii).

Conclusion

In view of the concepts and procedures discussed in the text, the exemplary manner of their presentation, the ease and pleasure with which the material may be read and understood, I would recommend this text to any undergraduate or graduate student interested in instructional design. However, because of the brief overview of some topics, the elimination of other topics and the absence of practice and feedback exercises, the textbook should be used as introductory material to be supplemented with considerable instruction and supervised application. Although the examples and techniques used appear to be most suitable to the design of textbook materials for secondary and college level instruction, preservice elementary school teachers may reap considerable benefit from reading the text, providing that supplementary instruction is available in the use of direct teacher instructional techniques.

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ASSESSING STUDENTS: HOW SHALL WE KNOW THEM? *By Derek Rowntree.* London: Harper & Row Ltd., 1977, 269 pp.

Without benefit of preface or introduction, Rowntree approaches his subject, assessing students, as if driven by the urgency of his subsequent question, "How shall we know them?", a crucial question that has not yet been answered. At the outset, he frankly admits that the topic is not unique: it is his approach that is different. His contention that the literature, extensive but narrow, with its emphasis on only one aspect of student assessment, tests and measurement, is not unfounded. In contrast, he presents "a spectrum of assessment" that ranges from the very informal to the highly formal, surveys a multitude of ways in which we can come to know a student, and emphasizes the 'Why?' as well as the 'How?' of assessment.

Rowntree devotes the first three chapters to upholding the claim that his approach to student assessment is broader than most. The discussion centres around the nature, purposes and possible side-effects of assessment. He recognizes that assessment is a part of evaluation but makes a careful distinction between the two and illustrates, as well, the relationship between educational assessment and "other forms of assessment prevalent in our society." To facilitate an orderly examination of the assessment process, he provides a five-dimensional framework, and then proceeds to "put some flesh on that austere framework" by answering each question posed in relation to each dimension.

Rowntree's questioning strategy is commendable. With emphasis on the heuristics of assessment, he can do no less than ask before telling. There is, however, one question that might be asked of him. Why the inconsistency in two chapter titles which are in the affirmative rather than the interrogative?

Beyond any doubt, the reader is offered plenty to 'chew on.' The questions allow him to think ahead and anticipate how the writer may answer each of the questions (why assess? what to assess? how to assess? how to interpret? and how to respond?) or he may squirm uneasily as the multitude of possibilities unfold. It is highly unlikely that many readers will come away feeling entirely satisfied with the limited ways in which they know their students at present.

However, even the most loyal reader may, at times, grow weary as Rowntree grapples with the problems peculiar to each dimension. Moreover, in spite of his good intention in drawing examples from all levels of education and from other countries, too, Rowntree tends to focus upon assessing students at the university level (where probably the need *is* the greatest) and in British school settings as, for example, in the discussion of the bureaucratic aspects of assessment (pp. 57-65).

In the final chapter Rowntree makes a valiant effort to draw together the major dimensions of student assessment by answering the key question — "How shall we know them?" — posed in the title of his book. It is obvious that the "seventeen modest proposals" he offers have been written from the point of view of a university teacher, although many of the suggestions, if not all, can be applied to students at any level, primary or university. Besides, earlier in the book, Rowntree does point out that all dimensions need not apply to every situation at a given time.

For whom has this book been written? As stated previously, although discussion throughout the book tends to focus upon assessing students at

the university level (Rowntree is himself a senior lecturer at The Open University), the five-dimensional framework for educational assessment provided by the author can be applied at all levels. Whether a teacher of the young or the not so young, a school administrator, a curriculum planner or an expert on evaluation, the reader may be shaken initially by the straightforward questions raised, yet, in the end, be sufficiently reenforced and energized to act in terms of some of the possible solutions offered. Only those who seek a single answer to the problem of student assessment will be disappointed.

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CHILDREN IN ENGLISH CANADIAN SOCIETY: FRAMING THE TWENTIETH CENTURY CONSENSUS. *By Neil Sutherland.* Toronto: University of Toronto Press, 1976, 356 pp., $19.95 (ISBN 0-8020-5340-8).

In an era when the pinnacle of scholarly publishing in Canadian education appears to be a collection of articles or a volume of documents gathered around a central theme, Neil Sutherland's *Children in English Canadian Society* is a laudable and welcome change. Here we have a seminal work upon which scholars may build. Sutherland has commenced the difficult task of explaining the development of the twentieth century Canadian view of childhood. In the process, he clearly demonstrates the superiority of the monograph as the principal vehicle for disseminating the results of scholarly inquiry.

Unfortunately, the work is made exceptionally complex by the inclusion of a mass of detail indicative of Sutherland's meticulous research and the time he has spent collecting his data. This complexity is unfortunate in that it often overshadows the thread of the author's argument, an argument already obscured by the author himself. Sutherland foregoes the use of a clear introduction and relies on title, chapter headings, and a faith in the deductive reasoning of the reader to elucidate the thesis of the work. Paradoxically, this weakness is also one of the great strengths of the work. This mass of detail will give the book the enduring quality of a major reference to which scholars for many years can be expected to turn.

Sutherland begins by discussing the late nineteenth century attitudes toward children and child-rearing that were characteristic of the Atlantic Provinces and Ontario. Children were viewed as miniature adults valuable as economic resources to most families. An increase in economic prosperity accompanied by a steadily rising standard of living, Sutherland argues, led to a growing determination to invest in ways and means of improving the lot of children. It is the development of this determination that Sutherland seeks to define and explain. He identifies the public health movement, the treatment of juvenile delinquents, and the use of the "New Education" for social reconstruction as the characteristic expressions of the embryonic consensus which was to reach maturity in the twentieth century. An examination of each of these characteristics form the next three sections of the book.

The public health movement was, according to Sutherland, the area which witnessed the greatest reform effort on behalf of children in this

particular period of Canada's history. The movement was primarily concerned with a three-pronged attempt at reform in the fields of health instruction and inspection in schools, infant mortality, and feeblemindedness. Sutherland is quick to point out that these activities in the field of public health were by no means unique to Canada and he places them within a wider international context.

From public health Sutherland turns to an examination of social health and the concern Canadians expressed about the newly identified problem of juvenile delinquency. He neatly demonstrates the conflict faced by reformers who, on the one hand were delighted with their increasing ability to identify potential criminals and, on the other hand were plagued with doubt arising from the fear that their newly won ability was nothing more than the result of an ever narrowing definition of delinquency. There followed a rather curious growth of institutions to cope with this newly defined problem. Such institutions, as Sutherland clearly shows, had a peculiar facility at adaptation, enabling them to flourish despite the ever changing rhetoric associated with them, the Boys' Reformatory at Penetanguishene being a case in point. Finally, he traces the development of public opinion which came to favour improvements in the family itself as being the most effective method of curbing the growth of a potential criminal element in the society.

Sutherland next investigates attempts at reform in the education system. He isolates two distinct yet complementary reform movements: a campaign to make education more practical, and a drive to make education more self-centred. Considerable attention is given to the impact of people such as Adelaide Hoodless and James L. Hughes and the stimulus provided by the Macdonald-Robinson Movement in the sphere of education. Sutherland concludes this section by tracing the influence of these developments upon practical measures taken through educational legislation passed during the second decade of the twentieth century.

In establishing that a consensus is indeed formed in the twentieth century, Sutherland relies on the formation of the Canada Council of Social Work and a speech delivered by Ontario's Provincial Secretary. The former is presented as a practical and unified expression of the three themes developed in the preceding three sections of the book. The latter is intended to demonstrate the extent to which the people of Canada, in general, subscribed to the views expounded by the reformers. Consequently, it would seem that Sutherland argues that politicians provide a reliable measure of public opinion. It is this general consensus, this middle class desire for a better society, that is apparently the major force behind the changing attitudes that Sutherland has attempted to explain.

After reading the book, one is left wondering whether Sutherland has, indeed, clearly demonstrated the development of a Canadian consensus. Throughout the work he constantly refers to the international context of which the events in Canada formed an integrated part. And, in so doing, he raises questions which must surely be considered fundamental to any research directed toward clarifying specifically Canadian developments. For example, he frequently asserts that Canadians constantly assessed the effectiveness of their programmes by comparing them with similar activities in the United States. But why, we are not told. Rather, one begins to wonder if Sutherland's constant use of the adjective Canadian simply in terms of geographical location has led him to believe that these

developments were also intellectually, and not merely geographically, Canadian.

A similarly often used and beguiling term is English Canadian Middle Class. Sutherland defines this term so broadly that one is left wondering if there was any other class at all in existence in Canadian society. This particular difficulty draws attention to an area much in need of study. It is time that Canadian historians gave some attention to the clarification of such vague and rather woolly terms particularly when they are referred to with such conviction and regularity.

Despite all this, Sutherland's work is destined to be a landmark in Canadian history, both as a first in its particular field and as a standard reference text. Its detail, footnotes, and bibliography will be used by students and scholars alike for years to come. What Sutherland has done is to provide a starting point for a dialogue on the history of childhood in Canada.

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